

EFFECTIVENESS OF ART THERAPY ON PRIMARY MENTAL
FUNCTION AMONG SCHIZOPHRENICS IN A SELECTED
PSYCHIATRIC REHABILITATION CENTRE
AT COIMBATORE.



A DISSERTATION SUBMITTED TO THE TAMILNADU DR.M.G.R.
MEDICAL UNIVERSITY, CHENNAI, IN PARTIALFULFILMENT
OF REQUIREMENT FOR THE DEGREE OF
MASTER OF SCIENCE IN NURSING
MENTAL HEALTH NURSING

APRIL- 2016

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BY
CHANDNI.C

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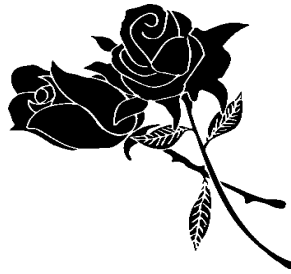
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FOR THE DEGREE OF MASTER OF SCIENCE IN NURSING
TO THE TAMILNADU DR.M.G.R. MEDICAL
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DEDICATION

Dedication



I dedicate this book to **God Almighty** who has been my source of Strength in every step of my life and foundation of my knowledge and wisdom.

I dedicate this book to my beloved parents

Mr. C. RAMACHANDRAN

&

Mrs. N. CHANDRAMATHI

Those who gave me a marvellous emotional support and without them my success won't be possible.

I also dedicate this book to my lovable brother

Mr. ARUN.C

Who always supports me in my blues

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ACKNOWLEDGEMENT

A journey is easier when we travel together. Interdependence is certainly more valuable than independence. This dissertation is the result of unbound immeasurable contribution and support of many people. It is a pleasure that, I have the opportunity to express my gratitude to all of them.

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ABSTRACT

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Schizophrenia is a complex chronic mental illness that is characterized by positive, negative and cognitive symptoms without racial or socioeconomic prejudice. It affects approximately one percent of the population worldwide and is a leading cause for disability and premature mortality in developed countries.

The objective of the study was to assess the level of primary mental function among schizophrenics, to evaluate the effectiveness of art therapy on primary mental function among schizophrenics in experimental group and to associate the post test level of primary mental function among schizophrenics with their selected demographic variables. The conceptual frame work used for the study was based on J.W Kenny's open system theory (1999).

A quasi experimental pre test post test design with the control group design was used in this study and 40 samples selected by using non probability purposive sampling technique in Kongunadu Mananala Arakkattalai Psychiatric centre, Coimbatore. Art therapy was given for experimental group. Data was collected before and after intervention by using Standardized Mini Mental State Examination tool. The study findings showed that the obtained 't' value was 6.95*. It was significant at $p < 0.005$ level. It shows that art therapy was effective in improving primary mental function among schizophrenics.

KEY TERMS: Effectiveness, Art therapy, Primary mental function and Schizophrenics.

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CHAPTER - I

INTRODUCTION

CHAPTER – I

INTRODUCTION

“Art washes away every day dust from life”

(-Picasso-)

Background of the Study

The word Schizophrenia was coined in 1908 by the Swiss psychiatrist Eugen Bleuler. It is derived from the Greek word *skhizo* (split) and *phren* (mind). Schizophrenia refers to a psychotic condition characterized by the disturbances in thinking, emotion and volition and faculties in the presence of clear consciousness, which usually leads to social withdrawal.

Primary mental function refers to the individual's ability in orientation, attention, calculation, memory, recall and language. Primary mental function is moderately to severely impaired in patients with schizophrenia. This impairment is the prime driver of the significant disabilities in occupational, social and economical functioning in schizophrenia and an important treatment target. The profile of deficits in schizophrenia includes many of the most important human cognition such as orientation, concentration, attention, calculation and memory (Keefe et al. 2012). The Diagnostic and statistical manual of mental illness includes primary mental function as a domain that will need to be evaluated by the clinicians in the course of diagnostic assessment of schizophrenia (Keefe & Fenton 2007).

Primary mental function has been firmly established as a predictor of real world community functioning as well as the ability to perform everyday living skills (Green et al. 1996). Severely impaired performance on primary mental function in

schizophrenia revealed that almost all patients with schizophrenia are functioning below the level that would be expected in the absence of illness (Kefee.et.al 2011). Cognitive impairments and associated deficits in the ability to perform everyday living skills are highly related to live independently.

Reduction in quality of life strongly associated with primary mental function impairment. The effect of cognitive impairment on quality of life in patients with schizophrenia is quite substantial. While primary mental function impairment is a key component of reduced quality of life in schizophrenia (Mohamed et.al 2008).

The most important domains of primary mental function deficits in schizophrenia are memory, attention, concentration, language, problem solving etc. Impairments in primary mental function can result in difficulty in following social conversation, simple activities become laboured or impossible. This results in various aspects of outcomes including social deficits, communication functioning & skill acquisition (Green et.al 2000).

Medication is the mainstay of treatment for schizophrenia. However, 5-15% of people continue to experience symptoms in spite of medication and may also develop undesirable adverse effects (Johnstone 1998). Art therapy is one of the creative therapies that can be used in addition to medication for helping people with schizophrenia.

The British Association of Art Therapists (BAAT) (2007) define “Art therapy is a form of psychotherapy that uses art media as its primary mode of communication”. Art therapy is also unique in the way that art materials are utilised to make a link with and engage severely disturbed people in psychodynamic therapy (Deco 1998).

Art therapy is one of the complementary therapies which can benefit a wide spectrum of disorders, disabilities and diseases. It helps the people to improve their mental, emotional and physical states.

Art therapy offers unique insights due to nature of its three way process between the client, the therapist and the image or artefact. It provides patients with the opportunity to address issues or express themselves in ways that transcend spoken or written language. This will provides both therapist and client to a 'traditional' therapeutic environment of one-on-one or group discussions. By creating a work of art, an individual can ventilate his powerful emotions that have been internalized.

The main aim of this study is to assess the effectiveness of art therapy on primary mental function among Schizophrenics. Practicing art therapy will enable the schizophrenics to improve their primary mental function.

Need for the Study

World Health Organisation (WHO, 2013) states that schizophrenia affects about 24 million people across the world, with a worldwide prevalence rate of about 7%. WHO estimate that the incident rate of schizophrenia is about 3 per 10,000 people. In terms of global burden of disease and disability schizophrenia ranks among the top 10 disorders of the world wide.

According to the report of Mental Health Foundation on World Mental Health Day in the year of 2014, 26 million people around the world are suffering from schizophrenia.

An incidence study conducted in India (2012) stated that the annual incidence rate of schizophrenia is 4.4 and 3.8 per 1000 population for rural and urban

respectively. According to National Institute of Mental Health (2012) about 1.1 % of adults in India suffer from schizophrenia. An epidemiological study on prevalence of mental illness in India (2012) published in Indian Journal of Community Medicine reported that the prevalence rate of schizophrenia was 2.3 per 1000 population.

Epidemiological studies conducted in India revealed that prevalence rate of schizophrenia in Tamilnadu is 3.87 per 1000. (Rangasamy 2011et.al). A report published in the year of 2011 by The New Indian Express, one of the leading newspapers in India showed that an average of 50-60 schizophrenia patients visit Coimbatore Medical College Hospital every day. Among them 4-8 of them are new cases.

Severely impaired performance on cognitive test is the strongest evidence for the importance of primary mental function deficit in schizophrenia. A plethora of systematic research from the past 10 years highlights that primary mental function impairment is one of the most important barriers to recovery in patients with schizophrenia. It is estimated that 98% of patients with schizophrenia have primary mental function impairment. It has been well established that cognitive deficits in schizophrenia are predictive of impaired functioning.

American Art Therapy Association (AATA-2008) states, that Art therapy is a mental health profession that uses the creative process of art making to improve and enhance the physical, mental and emotional well-being of individuals of all ages. It is based on the belief that the creative process involved in artistic self-expression helps people to resolve conflicts, problems, develop interpersonal skills, manage behaviour, reduce stress, increase self-esteem, self-awareness and improve primary mental functions.

Art therapy integrates the fields of human development, visual art (drawing, painting, sculpture, and other art forms), and the creative process with models of counselling and psychotherapy.

Phil Richardson et.al (2007) evaluated the effectiveness of art therapy to improve primary mental function among schizophrenics. It revealed that art therapy can be used as an adjunctive treatment for schizophrenia.

Gordana mandiel et.al (2009) conducted a study on group art therapy as an adjunct therapy for the treatment to schizophrenics and study concluded that art therapy is a useful adjunctive therapy for schizophrenics.

The present study intends to improve the primary mental function such as orientation, memory, attention and calculation and language among schizophrenia patients and thereby improve their activities of daily living. Hence the investigator chose to research on art therapy, in order to improve the level of primary mental function among schizophrenics.

Statement of the Problem

Effectiveness of art therapy on primary mental function among schizophrenics in a selected psychiatric rehabilitation centre at Coimbatore.

Objectives

- ✓ To assess the level of primary mental function among Schizophrenics in experimental and control group
- ✓ To determine the effectiveness of art therapy on primary mental function among Schizophrenics in experimental group.

- ✓ To find out the association of post test level of primary mental function among Schizophrenics with their selected demographic variables.

Hypotheses

H1: There is a significant difference in the level of primary mental function among Schizophrenics in experimental and control group

H2: There is a significant difference in the level of primary mental function among Schizophrenics in experimental group before and after art therapy.

H3: There is an association in the level of primary mental function among Schizophrenics with their selected demographic variables

Operational Definitions

Effectiveness

Effectiveness refers to the extent to which art therapy has achieved the desired effect by improving the primary mental function as assessed by Standardized Mini Mental State Examination tool.

Primary Mental Function

Primary mental function refers to the Schizophrenic's responses to orientation, attention, calculation, registration, recall and language as assessed by the researcher using Standardized Mini Mental State Examination tool inferred as no impairment, mild, moderate and severe impairment.

Art therapy

Art therapy is a systematic approach used by making the patient to draw a self perceived picture, joining the given dots, and painting on a given picture for duration of 30 minutes in a day for a period of 30 consecutive days.

Schizophrenics

Refers to person suffering with mental disorder often characterized by abnormal social behaviour, failure to recognize what is real and associated with impairment of Primary mental function.

Delimitations of the Study

This study is delimited to,

- ✓ patients suffering from schizophrenia.
- ✓ effect of art therapy
- ✓ primary mental function among schizophrenics
- ✓ assessment by standardized Mini Mental State Examination tool.

Projected Outcomes

- ✓ This study will help the nurses to assess the primary mental function among Schizophrenics by using Standardized Mini Mental State Examination tool.
- ✓ Art therapy techniques can be beneficial in improving primary mental function.
- ✓ The findings of the study will help the nurses to understand the importance of art therapy on primary mental function among Schizophrenia patients.
- ✓ The study findings will help the nurses to motivate the Schizophrenics to practice art therapy to reduce primary mental function impairment.

CHAPTER - II

REVIEW OF LITERATURE

CHAPTER -II

REVIEW OF LITERATURE

Review of literature is an important step in the development of any research project. It helps the investigator to analyze what is already known about the topic and to describe methods of inquiry used in earlier work including the success and shortcomings.

According to Polit and Hungler (2004), review of literature is a critical summary of research on a topic of interest, often prepared to put a research problem in the context.

This chapter deals with the collected information relevant to the present study through the published materials. These publications were the foundation to carry out the research work effectively.

Research literatures were reviewed and organized under the following headings:

- Studies related to primary mental function among Schizophrenics
- Studies related to Art therapy
- Studies related to effectiveness of Art therapy among Schizophrenics

Studies related to Primary Mental Function among Schizophrenics

Adeniran Oluburmi et.al (2014) conducted a study on cognitive functioning among patients with schizophrenia in a Nigerian Hospital. The objective of the study was to investigate correlation of cognition among schizophrenics. The 50 subjects were assessed by using positive and negative syndrome scale and clinical

global impression. Results shown that patient with schizophrenia has poor verbal response associated with negative syndrome. Study concluded that patient with negative schizophrenia may suffer more cognitive impairment.

Arun Pongpaisal et.al (2013) conducted a descriptive cross sectional study to evaluate the cognitive impairment in patient with schizophrenia in Thai. In that the main aim of the study was to examine the prevalence of cognitive impairment and associated factors in patients with schizophrenia. Montreal cognitive test was used to evaluate cognitive functions. Associated factors such as age of onset, type of antipsychotics were collected from medical records. The data were analysed by using descriptive and inferential statistics. The findings revealed that, the prevalence of cognitive impairment was 81.3%.The study concluded that the Thai patients with schizophrenia showed a high prevalence of cognitive impairment.

Bharati T Talreja et.al (2013) conducted a study to evaluate the cognitive function in schizophrenia and its association with socio demographic factors. Cognitive function in 100 patients with Schizophrenia as per DSM IV edition in the outpatient department of psychiatric unit were assessed by using Addenbrook's cognitive examination rating scale and mini mental state examination. The data were analysed by using chi square and 't' test. Result showed that, 70% of patient with schizophrenia found to have primary mental function dysfunction for attention, concentration, memory and language.

Andre Almen et.al (2012) conducted a meta analysis study to assess the memory impairment among schizophrenics. The objective of the study was to examine the exact magnitude and pattern of impairment. The findings revealed a significant and stable association between schizophrenia and memory impairment.

The composite effect size for recall performance was large. Recognition showed less, but still significant, impairment. The magnitude of memory impairment was not affected by age, medication, duration of illness, patient status, severity of psychopathology, or positive symptoms. Negative symptoms showed a small but significant relation with memory impairment. Researcher concluded that there is a significant impairment in schizophrenia. The impairment was stable, wide ranging, and not substantially affected by potential moderating factors such as severity of psychopathology and duration of illness.

Rajeev Krishna Das et.al (2007) conducted a cross sectional study to find out the relationship of cognitive function in patient with schizophrenia in India. The objective of the study was to compare the neurocognitive function in 25 patients of schizophrenics in remission was compared to 25 normal controls and to determine the relationship between cognition and functional disability. The study was conducted in the psychiatric unit of general hospital in Mumbi. Subjects were administered a battery of cognitive tests . correlation analysis was used to find out the relationship between illness factors, cognitive function and disability. Results showed that patient with schizophrenia showed significant deficits on test of attention, concentration, verbal and visual memory. The study concluded that persistent cognitive deficits are seen in patients with schizophrenia.

Heidi Bjoeorge et.al (2005) conducted a study to evaluate the significant changes in primary mental function from acute phase to nine month follow up. The samples comprised 36 patients with schizophrenia admitted to psychiatric unit for an acute psychotic episode. Primary mental function assessed by positive and negative syndrome scale at the baseline and follow up. Results showed that cognitive

impairment is there in schizophrenia patients and symptoms significantly changes from acute phase to 9 months later.

Sonia Beatriz et.al (2005) conducted a study to evaluate the cognitive function in Brazilian right hander's schizophrenia patients and healthy volunteers. 25 right handed schizophrenia and 25 young adults were included in the cross sectional design. The manual preference was evaluated with the Edinbargh Handedness Inventory and Cognitive performance with a series of new psychological tests. Results shown that , the right handed schizophrenia showed poorer performance in cognitive tests. Cognitive deficits were present in 60% of the samples. The findings suggested a more diffuse impairment in cognitive function among right handed schizophrenics.

Michel F Green et.al (2004) conducted a longitudinal study to evaluate primary mental function and functional outcome in schizophrenia in U.S. 18 longitudinal studies evaluated to find out the relationship between cognition and community outcome in schizophrenia. Cognitive deficits performance measures are related to the daily activities of patient with schizophrenia. Results of these studies revealed that considerable support for longitudinal association between primary mental function and community outcome in schizophrenia.

Studies related to Art Therapy

Potash S et.al (2014) conducted a quasi experimental study on art therapy and reduction in death anxiety and burnout in end – of – life care workers, among 129 workers in China. The samples were selected by using purposive sampling. The data was collected by using Hamilton Anxiety Rating Scale. The study revealed that art therapy reduces burnout among end – of – life care workers by enhancing emotional awareness and regulation, fostering meaning making and promoting reflection on

death. The study concluded that art therapy should be practiced by the end – of – life care workers.

Harel S et.al (2013) conducted an experimental study on effectiveness of intensive art therapy in youth with poorly controlled Type 1 Diabetes Mellitus, among 29 samples in Britain. The samples were selected by using convenient sampling. The data was collected by using Blood Sugar test. The study reported that improvement in glycemic control was seen in 56% of the case group and 23% of control group. The study concluded that intensive art therapy can recommend to those with poor glycemic control.

Bebee A., Gefland E W., Bender B., (2010) conducted a randomized trial on effectiveness of art therapy on children with asthma, among 22 children in Spain. The samples were selected by using randomization. The data was collected by using Hamilton Anxiety Rating Scale. The study revealed that after 6 months, the group maintained positive changes relative to the control group including less worry and anxiety. The study concluded that the art therapy is beneficial for children with asthma.

Madden J R et.al (2010) conducted a study on creative art therapy on improving quality of life for paediatrics with brain tumour receiving chemotherapy, among 16 children in Canada. The sample were selected by using purposive sampling. The data was collected by using Faces scale. The study revealed that patients were more excited, happier and less nervous. The study concluded that art therapy revealed positive experiences.

Thyme K E et.al (2009) conducted a randomized control clinical trial on individual brief art therapy can be helpful for women with breast cancer, among 41 women in France. The sample were selected by using simple random sampling technique. The data was collected by using Hamilton anxiety rating scale. The study revealed that significant lower rating of depression, anxiety, somatic symptoms and less general symptoms for the art therapy group when compared with the control group. The study concluded that art therapy has a long term effect on the crisis following the breast cancer and its consequences.

Bar-Sela G et.al (2007) conducted an experimental study on effect of art therapy on depression and fatigue levels in cancer patients on chemotherapy, among 60 cancer patients in Sydney. The samples were collected by using simple random sampling. The data was collected by using Beck Depression Inventory. The study revealed that art therapy is worthy in the treatment of cancer patients with depression or fatigue during chemotherapy treatment. The study concluded that art therapy should be included in the training programs of health workers.

David Gussak et.al (2007) conducted a study on the effectiveness of art therapy in reducing depression among prison population. Sample of the study was male adult prison in rural Florida with experimental design. 48 inmates chosen by the mental health counsellor received art therapy for a 4 week of period, two group sessions per week. The range of participants was 21 to 63 years. They all had an axis-I diagnosis such as dysthymia or BPAD, mania. All attended counselling sessions on the day treatment unit and were expected to attend art therapy session on the day as a point of their treatment. 51% received antipsychotics. Tools like baseline depression inventory, survey developed tools were administered twice, once before intervention and once after, with the scores compared to ascertain therapeutic change. Results

shown that 16 members of the experimental group and 13 members of control group completed a pre and post BDI II assessment. Researcher concluded that the art therapy was beneficial to the inmate population of the prison.

Oster I et.al, (2006) conducted a randomized controlled study on effect of art therapy on coping resources in women with breast cancer, among 41 women with non-metastatic primary breast cancer in Berlin. The sample were selected by using simple random sampling. The data was collected by using Cancer Behaviour Inventory. The study revealed that there was an increase in coping resources among women with breast cancer after taking part in the art therapy intervention. The study concluded that individual art therapy provided by a trained art therapist in a clinical setting can give beneficial support to women with primary breast cancer undergoing radiotherapy, as it can improve their coping resources.

Banks S et.al (2004) conducted a quasi experimental study on the effects of directed art therapy on behaviour of young children with disabilities, among 23 children in New Jersey. The subjects were selected by using purposive sampling. The data was collected by using Vineland Adaptive Scale. The study revealed that the directed art therapy had a larger effect on the social condition of the children. The study concluded that the art therapy can be use by preschool and other teachers to improve the behaviour of the young children.

Studies related to Art Therapy in Schizophrenics

Baptisle et.al (2013) conducted a group art therapy for schizophrenia. The study aimed to investigate whether art therapy was more effective for specific subgroups of patients. They included patients of 18 years of age and having clinical

diagnosis of schizophrenia. Study concluded that the identification of patients with schizophrenia who may benefit most from group art therapy remain elusive.

Crawford MJ et.al (2012) conducted a randomized controlled trial study on group art therapy as an adjunctive treatment for people with schizophrenia. The objective of the study was to examine the effectiveness and cost effectiveness of referral to group art therapy along with standard care. The study concluded the group art therapy can be use as a adjunctive treatment for schizophrenia along with standard care and also need further investigation in this field.

Phil Richardson et.al (2007) conducted a randomised controlled trial on art therapy as an adjunctive treatment for schizophrenia. The aim of the study was to conduct the first explanatory RCT of group interactive art therapy as an adjunctive treatment for schizophrenia. The outcomes of 43 patients randomized to 12 sessions of AT were compared with those of 47 who received standard psychiatric care. Patients were assessed on a range of measures of symptoms, social functioning and quality of life at pre- and post-treatment and six-month follow-up. Results showed that art therapy produced a statistically significant positive effect on negative symptoms (assessed by Scale for the Assessment of Negative Symptoms) though had little and non-significant impact on other measures. The study concluded that art therapy can be use as an adjunctive treatment for schizophrenia.

Gordana Mandic et.al (2009) conducted a study on group art therapy as an adjunct therapy for the treatment for the treatment to schizophrenics in day hospital. Case report presented clinical observations of group art therapy of two schizophrenia patient during integrative therapy in day hospital. Researcher modified the original “synallactic collective image technique”. The group is open,

heterogeneous meets once in a week and discuss on exhibited drawings, drawn by free associations. The patients' drawings and group protocol showed clinical improvement by lowering depressive themes, more human figures and self confidence. The researcher concluded that group art therapy enables visual expression of emotions, perceptions and cognitions develop creative potentials and support within the group, thus facilitating the integrative therapeutic process schizophrenics. It may be useful adjunctive therapy for schizophrenic patients.

Rachel Ruddy et.al (2009) conducted a study on art therapy for schizophrenia. The objective of the study was to review the effects of art therapy as an adjunctive treatment for schizophrenia compared with standard care and other psychosocial interventions. The selection criteria for the study was all randomized controlled trials that compared art therapy with standard care and other psychosocial interventions for schizophrenia. Result showed a small but significant difference favouring the art therapy group. The researcher concluded that randomized studies are possible in this field, but further evaluation of the use of art therapy for serious mental illness is needed as its benefits or harms remain unclear.

CONCEPTUAL FRAME WORK

J.W KENNY'S OPEN SYSTEM MODEL (1999)

Tabot (1995) stated that 'A conceptual framework is a network of interrelated changes that provide a structure for organizing and describing the phenomenon of interest'. Research studies are based on the theoretical frame work that facilitates visualizing the problem and places the variables in a logical context.

A conceptual framework or model is made up of concepts, which are the mental images of the phenomenon. These concepts are linked together to express the relationship between them. A model is used to denote symbolic representation of concepts. One of the important purpose of the conceptual framework is to communicate clearly the interrelationship of various concepts. It guides on investigator to know what data needs to be collected and give direction to the entire research process (Kerlinger K.N, 1993).

The present study aim to evaluate the effectiveness of art therapy on primary mental function among schizophrenics. Conceptual framework of this study was developed based on "J.W Kenny's Open System Model". According to J.W Kenny, all living system are in continuous exchange of energy, matter and information, which results in varying degree of interaction with environment from which the system receives input and gives back output in the form of matter, energy and information. System model consist of three phases input, throughput and output.

Input

Based on J.W Kenny's input can be matter, energy and information from the environment.

In the present study environment refers to the psychiatric rehabilitation centre and input refers to schizophrenics with impaired primary mental function (with their selected demographic variables).

Throughput

According to J.W Kenny's the matter, energy and information are continually processed through the system which also called complex transformation, known as throughput. Process is the form of input that is energy and information for the maintenance of homeostasis of the system.

In the present study the process is the art therapy intervention for 30 minutes per day for 30 days in experimental group but control group received no intervention.

Output

J.W Kenny noted after processing the input, the system returns to the output (matter, energy and information) to the environment in an altered state. Change is the feature of the process that is observable and measurable as output. This should be different that which is entered in to the system. In the present study the difference is the improvement in the primary mental function among schizophrenics and no improvement in control group in post test.

Feedback

According to him, for feedback information of environmental responses to the system in adjustment, correction and accommodation to the interaction with the environment. The effectiveness of art therapy in improving primary mental function considered as the difference observed and expected.

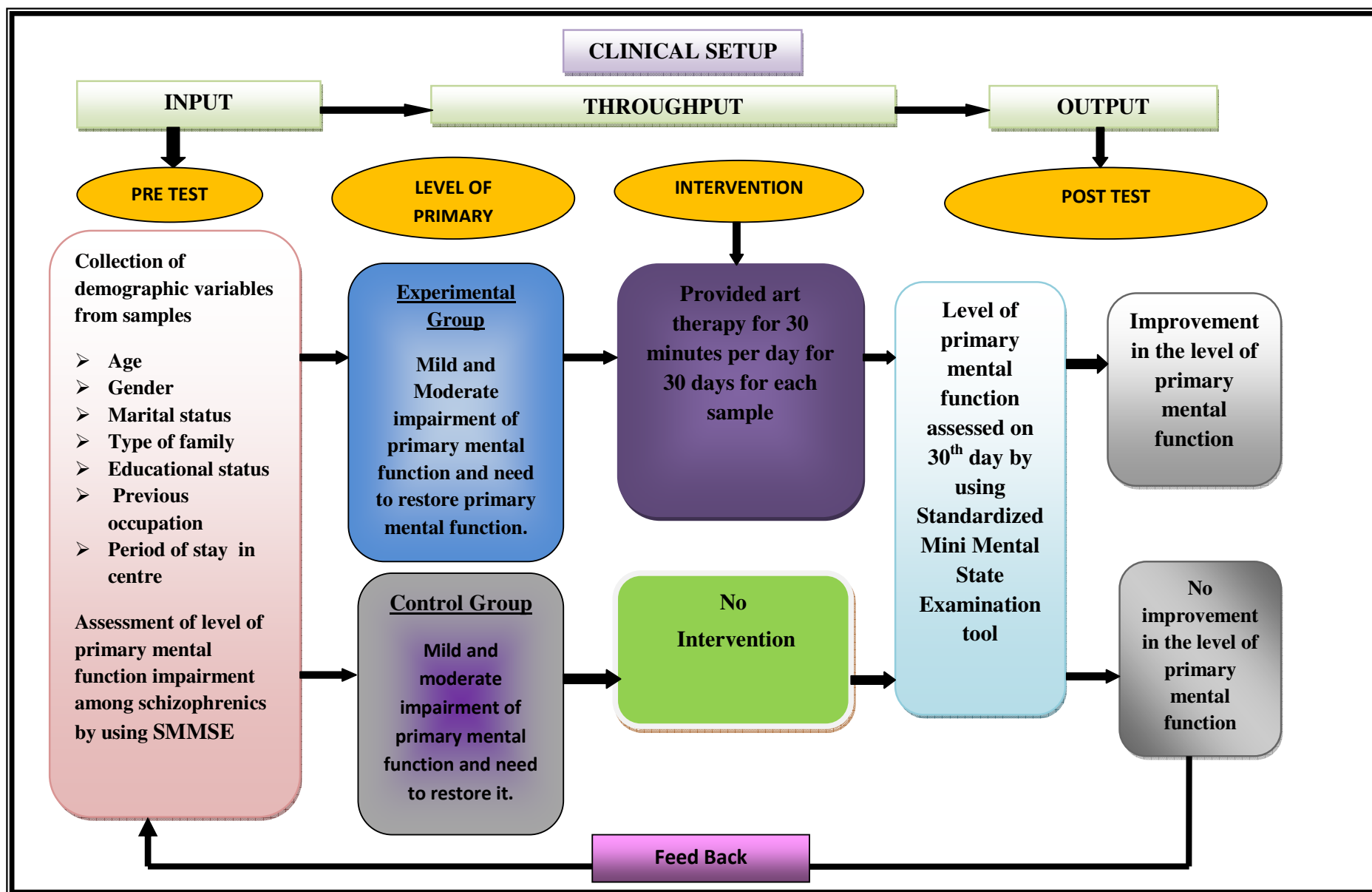


Figure 1: Modified Conceptual Frame Work Based on J.W Kenny's open system model (1999)

CHAPTER - III

METHODOLOGY

CHAPTER - III

METHODOLOGY

Methodology deals with the research approach, research design, variables, setting of the study, population, sample size, sampling technique, criteria for selection of the sample, development of the tool, description of the tool, scoring procedure, validity, reliability, pilot study, data collection procedure, plan for data analysis and protection of human rights.

According to Polit and Hungler (2004) “Research Methodology refers to the researcher ways of obtaining, organizing and analyzing data.”

Research Approach

Polit and Hungler, (2004) defined the research approach as a general set of orderly discipline procedure used to acquire information.

A quantitative approach was used in this study to evaluate the effectiveness of art therapy on level of primary mental function among schizophrenics.

Research Design

Polit and Hungler, (2004) defined research design as overall plan for addressing a research questions, including specification for enhancing the study integrity.

A quasi experimental pre- test post -test design with control group was chosen for analyzing the effectiveness of art therapy on primary mental function among schizophrenics.

The diagrammatic representation of the research design given as follows:

Group	Pre Test	Intervention	Post test
Experimental	O1	X	O2
Control	O3	-	O4

Key:

O1 : Pre-test assessment of primary mental function in experimental group.

O2 : Post-test assessment of primary mental function in experimental group

X : Art therapy

O3 : Pre-test assessment of primary mental function in control group.

O4 : Post-test assessment of primary mental function in control group.

Variables

Polit and Hungler, (2005), defined variable as an image, perception or concept that is capable of measurement – hence capable of taking on different values – is called a variable.

Dependent variable : Primary mental function

Independent variable : Art therapy.

Setting of the Study

Polit and Hungler, (2005), stated that the physical location and condition in which data collection has taken place in a study is the setting of the study.

The study was conducted in Kongunadu Mananala Arakkatalai psychiatric centre at Coimbatore. It is a 75 bedded psychiatric hospital which includes all the cases of mental illness, majority are the patients with schizophrenia. Nearly 10 cases

per month admitted for the treatment of schizophrenia. It is a long term psychiatric care centre.

Population

According to Polit and Hungler, (2005) “A population is the entire aggregation of cases in which a researcher is interested.”

Target Population:

The Target population selected for the study was Schizophrenics with impaired primary mental function.

Accessible Population:

In this present study the accessible population is schizophrenics with mild & moderate level of primary mental function in Kongunadu Mananala Arakatalai psychiatric Centre at Coimbatore.

Sample

According to Polit and Hungler (2005), sample is a subset of population selected to participate in research study.

Total number of 40 samples was selected for the study, in which 20 samples were included in experimental group and 20 samples were in control group.

Criteria for Sample Selection

Inclusion criteria

- Clients who are diagnosed as schizophrenics
- Schizophrenics with mild and moderate impairment of primary mental function
- Clients who can understand Tamil or English

Exclusion Criteria

Schizophrenics ,

- With associated disorder like mental retardation, personality disorder etc
- With severe and No impairment of primary mental function
- Who are not willing to participate.

Sampling Technique

Polit and Hungler, (2005) defined “sampling technique is the process of selecting a portion of the population to represent the entire population.”

In this study the samples were selected by adopting non probability purposive sampling technique. 40 samples were selected based on inclusion and exclusion criteria.

Development of the Tool

Treece and Treece (1986), emphasized that the instrument selected in research should as far as possible be the vehicle that would best obtain data for drawing conclusion pertinent to the study.

The Standardized Mini Mental State Examination was used as instrument to measure the level of primary mental function among schizophrenics. The instrument was developed in English after an extensive review of literature and experts opinion. It was translated into Tamil by language experts.

Description of the Tool

The instrument consists of two sections

Part I

Consists of demographic variables of Schizophrenics such as age, gender, marital status, type of family, educational status, previous occupation, and period of stay in the hospital.

Part II

Consists of Standardized Mini Mental State Examination tool used to assess the level of impairment of primary mental function among schizophrenics. The Standardized Mini Mental State Examination Scale was developed by Molloy et.al in (1991) consists of 5 items. The tool is assessed for answer either ‘correct’ or ‘error’ response. Each correct answer was given a score ‘1’ and wrong answer ‘0’. Hence, the maximum possible score was ‘30’ and minimum possible score was ‘0’.

Score Interpretation

25 – 30 : No impairment

21 - 24 : Mild impairment

10 - 20 : Moderate impairment

<10 : Severe impairment

Validity

According to Nancy Burns (2011) “the validity of an instrument is the determination of the extent to which an instrument actually reflects the abstract construct that is being examined.”

Validity of the tool was obtained from experts. Their valuable suggestions were taken into consideration and corrections were made accordingly. The tool was found to be valid.

Reliability

According to Polit and Hungler (2004), “Reliability of an instrument is the consistency with which it measures the target attribute.”

In this study, a Standardized Mini Mental State Examination tool was used to assess the level of impairment of primary mental function among schizophrenics.

Pilot Study

Polit and Nancy (2005) denote that there should be a small scale version or trial run done in preparation for major study.

The pilot study was conducted in Udham Psychiatric Rehabilitation centre at Coimbatore. The data were analyzed to find out the feasibility of statistical methods. The pilot study found to be feasible and it is very useful in testing the instrument.

Data Collection Procedure

According to Polit and Hungler (2005) “data collection is the gathering of information needed to address a research population.”

The data collection procedure was done for 30 days in Kongunadu Mananala Arakatalai psychiatric rehabilitation centre, Coimbatore. Initially the permission was obtained from the administrative authority (the director) of the centre. Screening of patients done by using Standardized Mini Mental Status Examination tool, among that 40 sample were selected with mild and moderate impairment of primary mental function. Twenty subjects were allotted to experimental group and remaining to control group. The subjects were selected by non probability purposive sampling technique. The nature and purpose of the study was explained and consent obtained from the sample.

On the same day the pre test was done for the samples by using Standardized Mini Mental State Examination. From 2nd day, intervention of art therapy was explained and taught to subjects of the experimental group. Art therapy program was given as intervention for 30 consecutive days after the pre test. The duration of intervention was for 30 minutes per day. The investigator assessed the level of primary mental function on the 30th day after intervention program for both experimental and control group.

Plan for Data Analysis

The data were analysed by both descriptive and inferential statistics. The data related to demographic variables were analysed by using descriptive statistics (frequency, percentage). The level of primary mental function was assessed by using descriptive measures (mean, standard deviation). The effectiveness of art therapy on primary mental function among schizophrenics was analyzed by paired “t” test and unpaired ‘t’ test. The association of post test score of primary mental function with their demographic variables were assessed by using chi square test.

Protection of Human Rights

The study was conducted after the approval of research committee of the college. The nature and purpose of the study was explained to the health care personnel involved. Permission was obtained from the authority of the study centre. The consent was obtained from the study participants and assurance was given to them that the confidentiality would be maintained throughout the study. The art therapy technique was taught and administered to all the other schizophrenics of the centre after the post test to overcome the ethical issue.

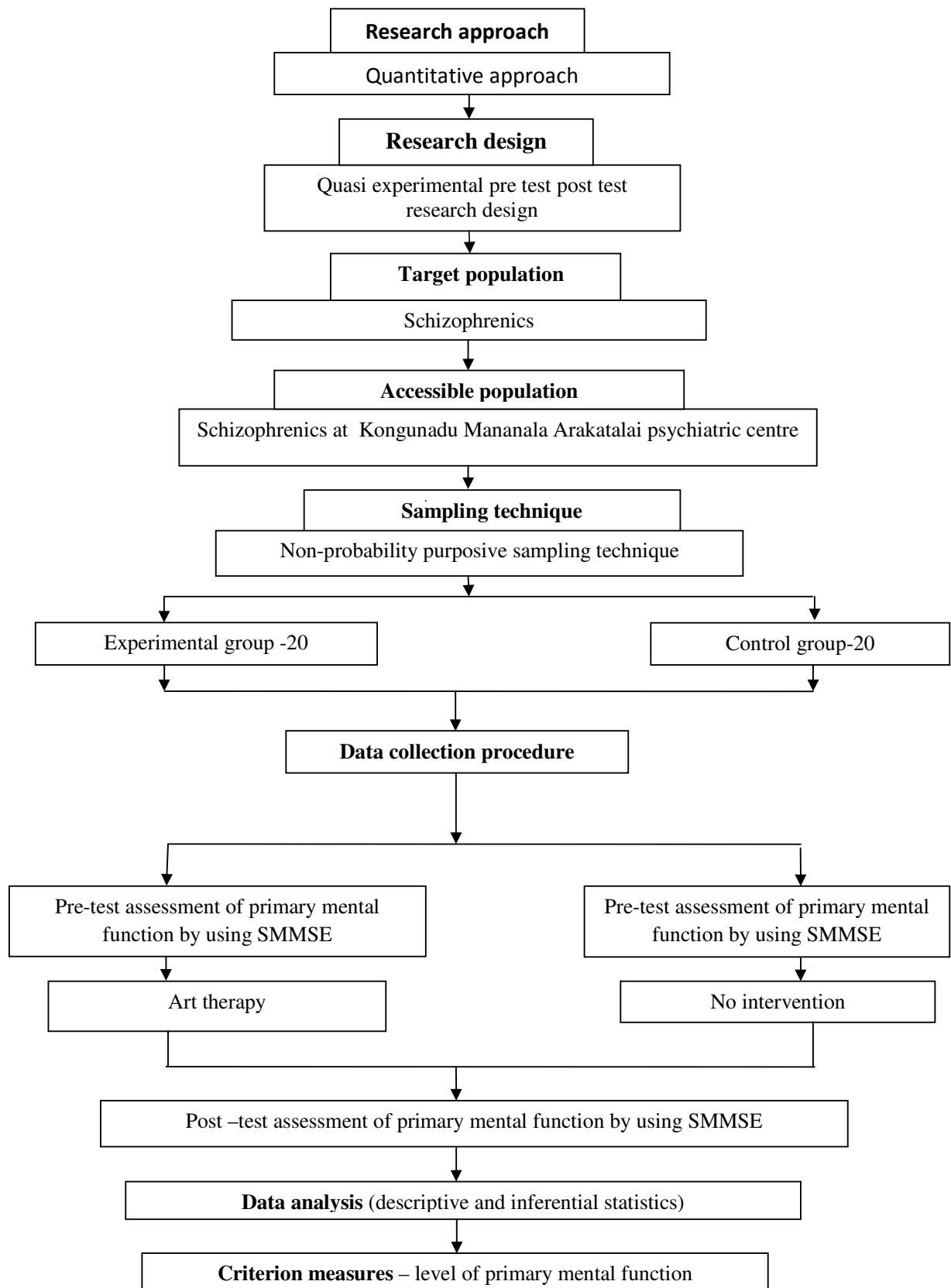


Fig: 2 The Schematic Representation of Research Methodology

CHAPTER - IV

DATA ANALYSIS & INTERPRETATION

CHAPTER IV

DATA ANALYSIS AND INTERPREATION

The chapter deals with the analysis and interpretation of data collected from schizophrenics to evaluate the effectiveness of art therapy on primary mental function among schizophrenics. The purpose of the analysis is to reduce the data manageable and interpretable form, so that the research problems can be studied and tested.

Polit and Beck, (2003) has defined that the data analysis as “The systematic organization, synthesis of research data and testing of research hypothesis using those data.”

The analysis and interpretation of this study was based on the data collected through structured interview method from the patient's with schizophrenia. The results were computed using descriptive and inferential statistics.

The study findings are presented in sections as follows:

- Section - I : Data on demographic variables of Schizophrenics.
- Section – II : Data on level of impairment primary mental function among Schizophrenics.
- Section –III : Data on effectiveness of Art therapy on level of primary mental function.
- Section – IV : Data on association between level of primary mental function among Schizophrenics with their selected demographic variables.

SECTION I :
DATA ON DEMOGRAPHIC VARIABLES OF
SCHIZOPHRENICS

Table: 1

Frequency and Percentage distribution of schizophrenics with their selected
Demographic variables in Experimental and Control group.

N= 40

Sl. No.	Demographic Variables	Experimental group		Control group		Total	
		n	%	n	%	n	%
1	Age						
	a) 31 to 40 years	8	40	6	30	14	35
	b) 41 to 50 years	5	25	8	40	13	32.5
	c) 51 to 60 years	7	35	6	30	13	32.5
2	Gender						
	a) Male	12	60	10	50	22	55
	b) Female	8	40	10	50	18	45
3	Marital status						
	a) Single	12	60	10	50	22	55
	b) Married	6	30	7	35	13	32.5
	c) Divorced	1	5	3	15	4	10
	d) Widow/widower	1	5	0	0	1	2.5
4	Type of family						
	a) Nuclear	12	60	11	55	23	57.5
	b) Joint	8	40	9	45	17	42.5
5	Educational status						
	a) Illiterate	0	0	0	0	0	0
	b) Primary	4	20	2	10	6	15
	c) Secondary	7	35	8	40	15	37.5
	d) Higher secondary	3	15	6	30	9	22.5
	e) Graduate	6	30	4	20	10	25
6	Previous occupation						
	a) Unemployed	8	40	6	30	14	35
	b) Self employed	7	35	4	20	11	27.5
	c) Govt. employee	1	5	1	5	2	5
	d) Pvt. employee	4	20	9	45	13	32.5
7	Period of stay in centre						
	a) <1 year	8	40	3	15	11	27.5
	b) 1 to 3 years	7	35	9	45	16	40
	c) Above 3 years	5	25	8	40	13	32.5

Table 1 reveals that with regards to age, the majority of the patients with schizophrenia were, 14 (35%) belonged to 31-40 years .Among 8 (40%) and 6 (30%) belonged to both experimental and control group. 13(32.5%) belonged to the age group of 41 -50years, among 5 (25%) and 8 (40%) belonged to experimental and control group respectively. 13 (32.5%) belongs to 51-60 years among 7 (35%) and 6 (30%) belongs to experimental and control group respectively.

Regarding gender, majority of the patients with schizophrenia, 22 (55%) were male, in that 12 (60%) and 10 (50%) belonged to experimental group and control group respectively. 18 (45%) were female in that 8 (40%) and 10 (53.4) belonged to experimental group and control group respectively.

Regarding marital status, majority of the patients with schizophrenia, 22 (55%) were single, among whom 12 (60%) and 10 (50%) belonged to experimental group and control group respectively.13 (32.5%) were married, among which 6 (30%) and 7 (35%) belonged to experimental group and control group respectively. 4 (10%) were divorced, among 1 (5%) and 3 (15%) in experimental and control group. 1 (5%) belonged to widower or widow category in experimental group.

Regarding type of family, 23 (57.5%) belonged to nuclear family, among that 12 (60%) and 11(55%) in experimental and control group respectively. 17 (57.5%) belonged to joint family in that 8 (40%) and 7 (40%) belonged to experimental and control group respectively.

Regarding educational status, majority of the patients with schizophrenia, 15 (37.5%) comes under secondary education, in that 7 (35%) and 8 (4%) belongs to experimental group and control group respectively. 6 (15%) comes under primary education, in that 4 (20%) and 2 (15%) belongs to experimental and control group

respectively. 9 (22.5%) belonged to higher secondary education , among 3 (15%) and 6 (30%) belonged to experimental and control group respectively. 10(25%) belonged to graduate in that 6 (30%) and 4 (20%) belonged to experimental and control group respectively.

Regarding previous occupation, majority of the people 14 (35%)were unemployed, among whom 8 (40%) and 6 (30%) belonged to experimental group and control group respectively. 11 (27.5%) were self employed among 7 (35%) and 4 (20%) belongs to experimental and control group respectively. 2 (5%) were government employees, equally divided in both experimental and control group.13 (32.5%) belongs to private employees among 4 (20%) and 9 (45%) belongs to both experimental and control group respectively.

Regarding period of stay in centre, majority 16 (40%) belonged to 1-3 years, in that 7 (35%) and 9 (45%) in both experimental and control group. 11(27.5%) belonged to less than 1 year among which 8 (60%) and 3 (15%) belonged to experimental and control group respectively. 13 (32.5%) belonged to above 3 years, among 5 (25%) and 8 (40%) belonged to experimental ad control group respectively.

SECTION II:
DATA ON LEVEL OF PRIMARY MENTAL FUNCTION
AMONG SCHIZOPHRENICS

Table 2.1

Frequency and percentage distribution of pre test and post test level of primary mental function among schizophrenics in Experimental group.

N=20

Sl. No.	Level of primary mental function	Pre test score		Post test score	
		n	%	n	%
1	No impairment	-	-	1	5
2	Mild impairment	2	10	6	30
3	Moderate impairment	18	90	13	65

Table 2.1 shows that the level of primary mental function among schizophrenics in experimental group. Out of 20 sample, 18 (90%) had moderate impairment and 2 (10%) had mild impairment in pre test. In post test 1 (5%) had no impairment, 6 (30%) had mild impairment and 13 (65%) had moderate impairment of primary mental function.

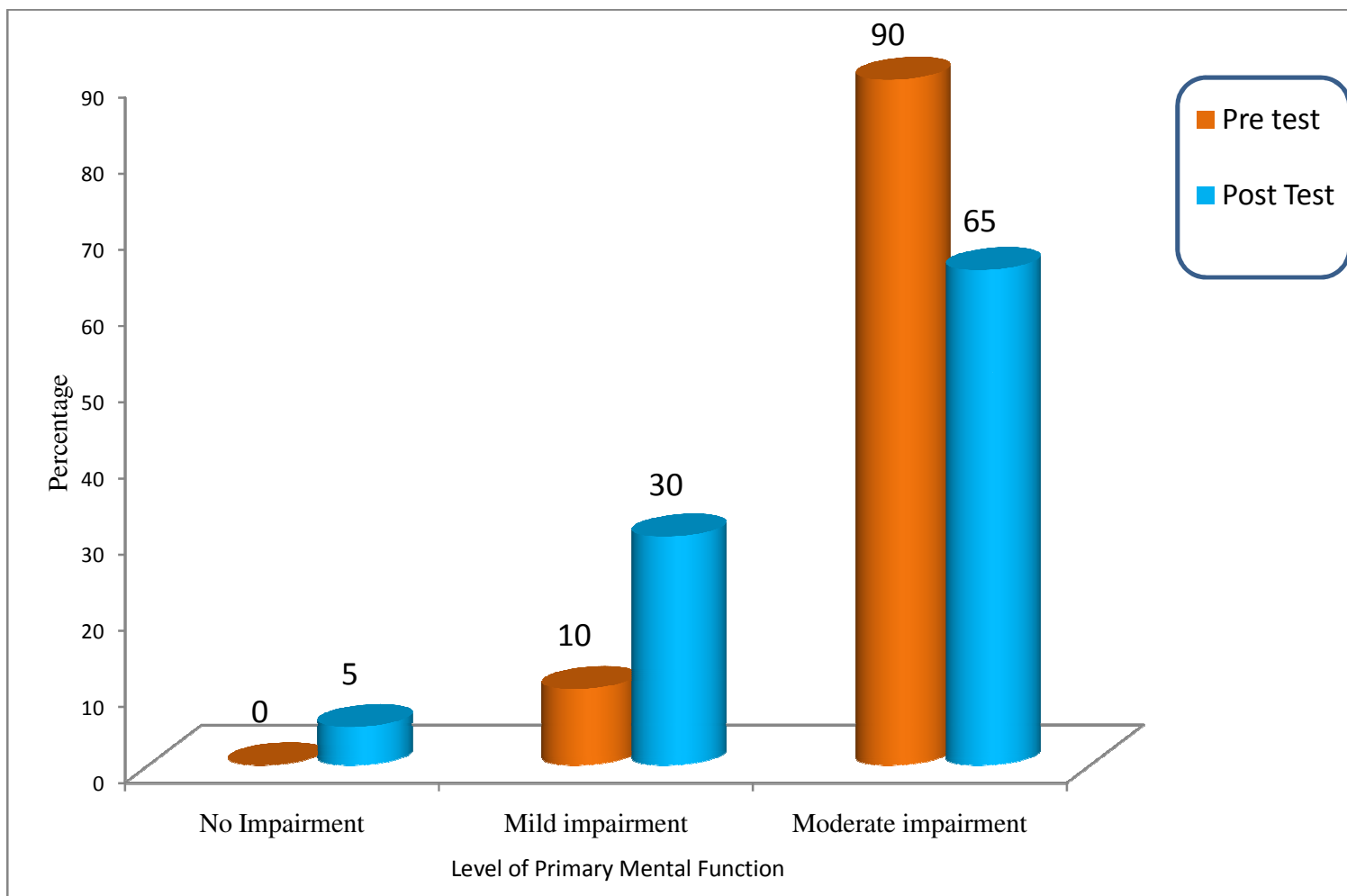


Fig 3: Level of Primary Mental Function among Schizophrenics in Experimental group

Table 2.2

Frequency and Percentage distribution of pre test and post test level of primary mental function among schizophrenics in Control group.

N=20

Sl. No.	Level of primary mental function	Pre test score		Post test score	
		n	%	n	%
1	No impairment	-	-	-	-
2	Mild impairment	2	10	2	10
3	Moderate impairment	18	90	18	90

Table 2.2 shows that the level of primary mental function among schizophrenics in control group. In pre test and post test score 18 (90%) had moderate impairment and 2 (10%) had mild impairment of primary mental function.

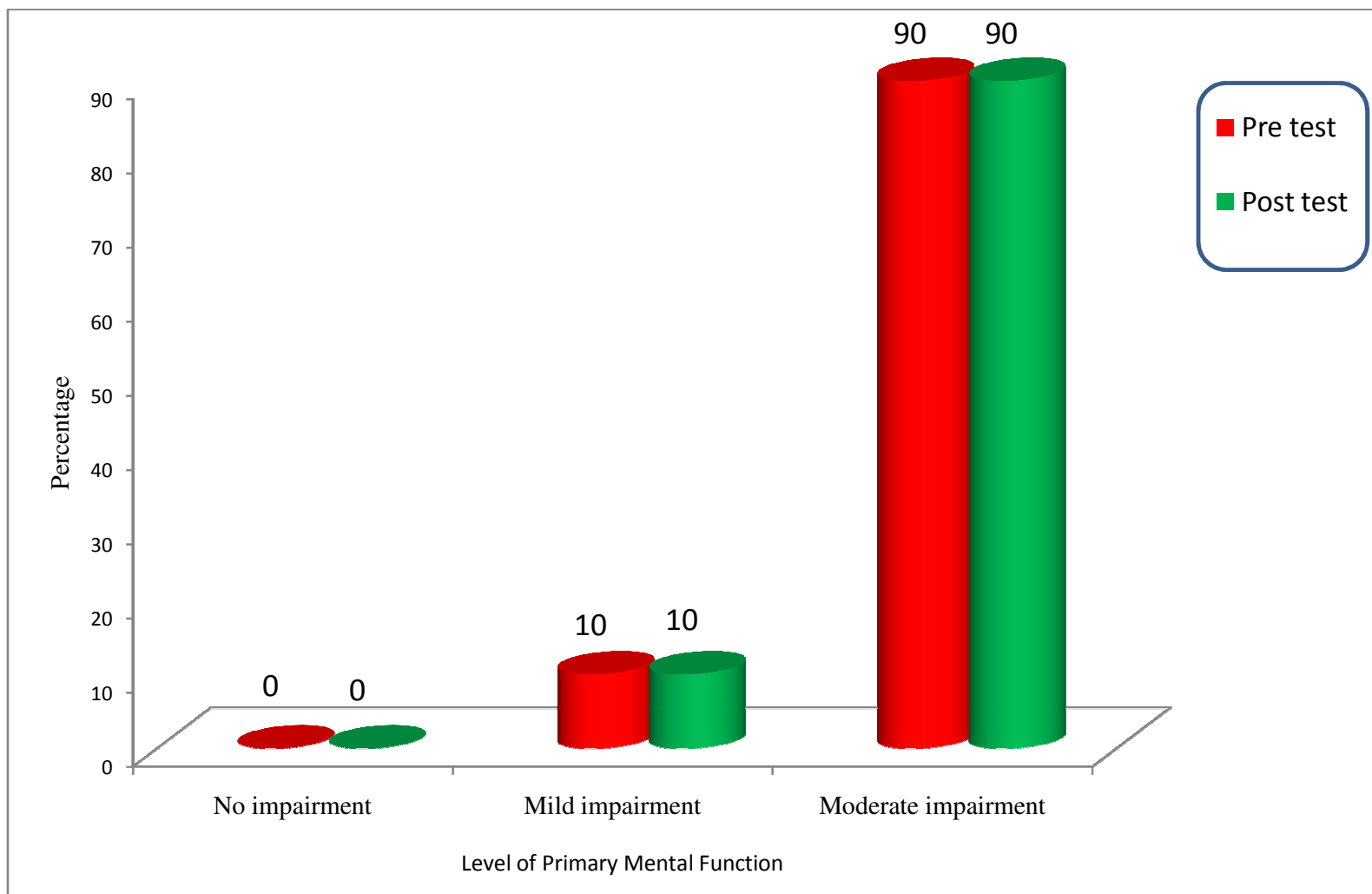


Fig 4: Level of Primary mental function among Schizophrenics in Control group

SECTION III:
DATA ON EFFECTIVENESS OF ART THERAPY ON PRIMARY
MENTAL FUNCTION AMONG SCHIZOPHRENICS

Table 3.1

Mean, Standard deviation , Mean difference and 't' value of pre test and post test level of primary mental function among Schizophrenics in Experimental group.

N = 20

Sl. No.	Group	Mean	Standard Deviation	Mean Difference	"t" value
1	Experimental group				
	Pre test	17.75	2.74	1.25	6.95*
	Post test	19	2.61		

*Significant at $p < 0.05$ level

Table 3.1 reveals that among experimental group, the mean pre test score was 17.75 with standard deviation 2.74 was less than the mean post test score 19 with standard deviation 2.61. The calculated mean difference was 1.25. The obtained "t" value is 6.95 was significant at $p < 0.05$ level.

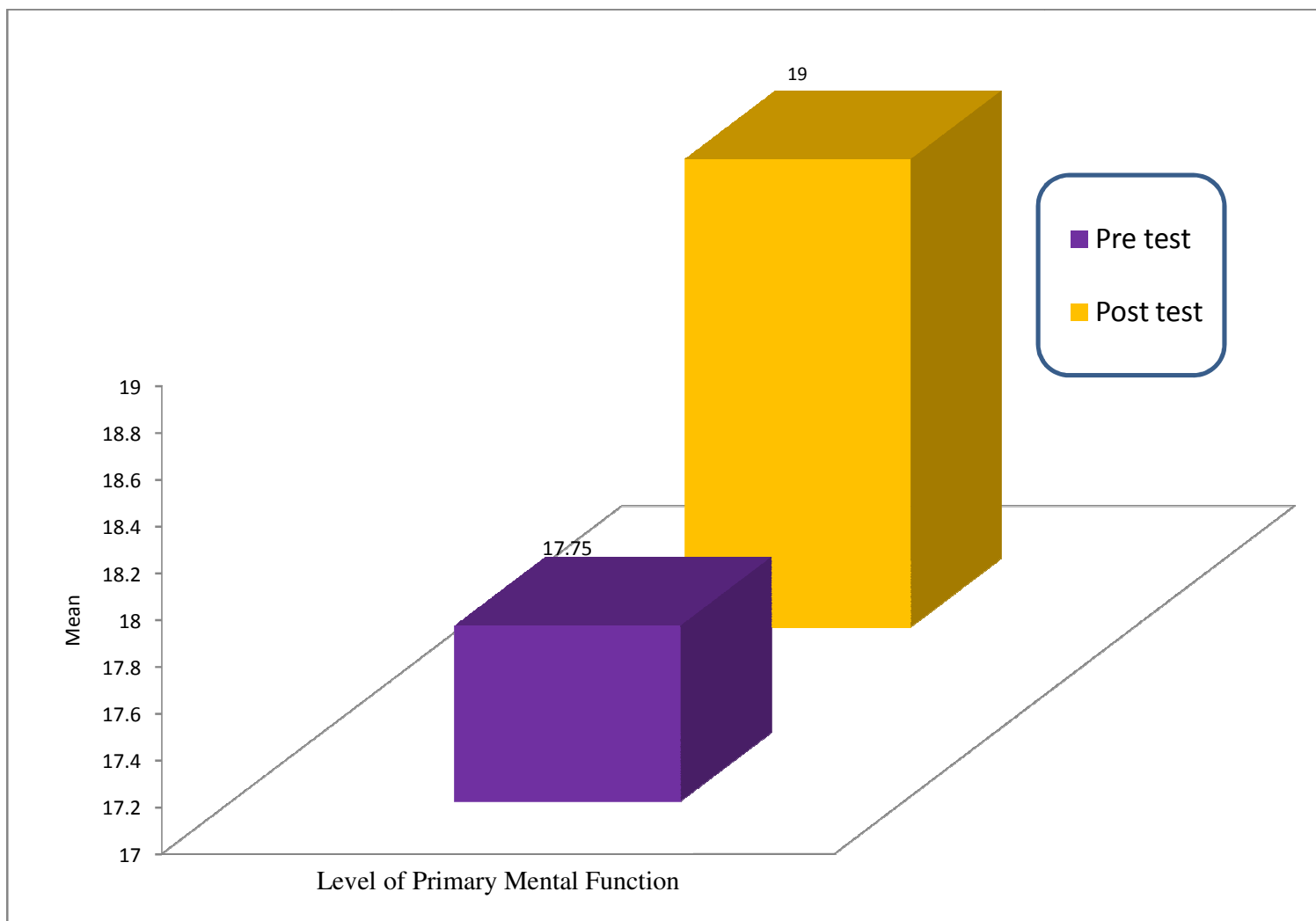


Fig 5: Mean Pre and Post Test Value on level of Primary Mental Function among Schizophrenics in Experimental Group

Table: 3.2

Mean, Standard deviation, mean difference and 't' value of pre test and post test level of primary mental function among Schizophrenics in Control group.

N = 20

Sl. No.	Group	Mean	Standard Deviation	Mean Difference	"t" value
1	Control group				
	Pre test	17.1	2.42	0.1	NS
	Post test	17.2	2.48		0.3

NS-Non Significant

Table 3.2 reveals that among control group, the mean pre test score was 17.1 with standard deviation 2.42 was less than the mean post test score 17.2 with standard deviation 2.48. The calculated mean difference was 0.1. The obtained "t" value is 0.3 was not significant at $p < 0.05$ level.

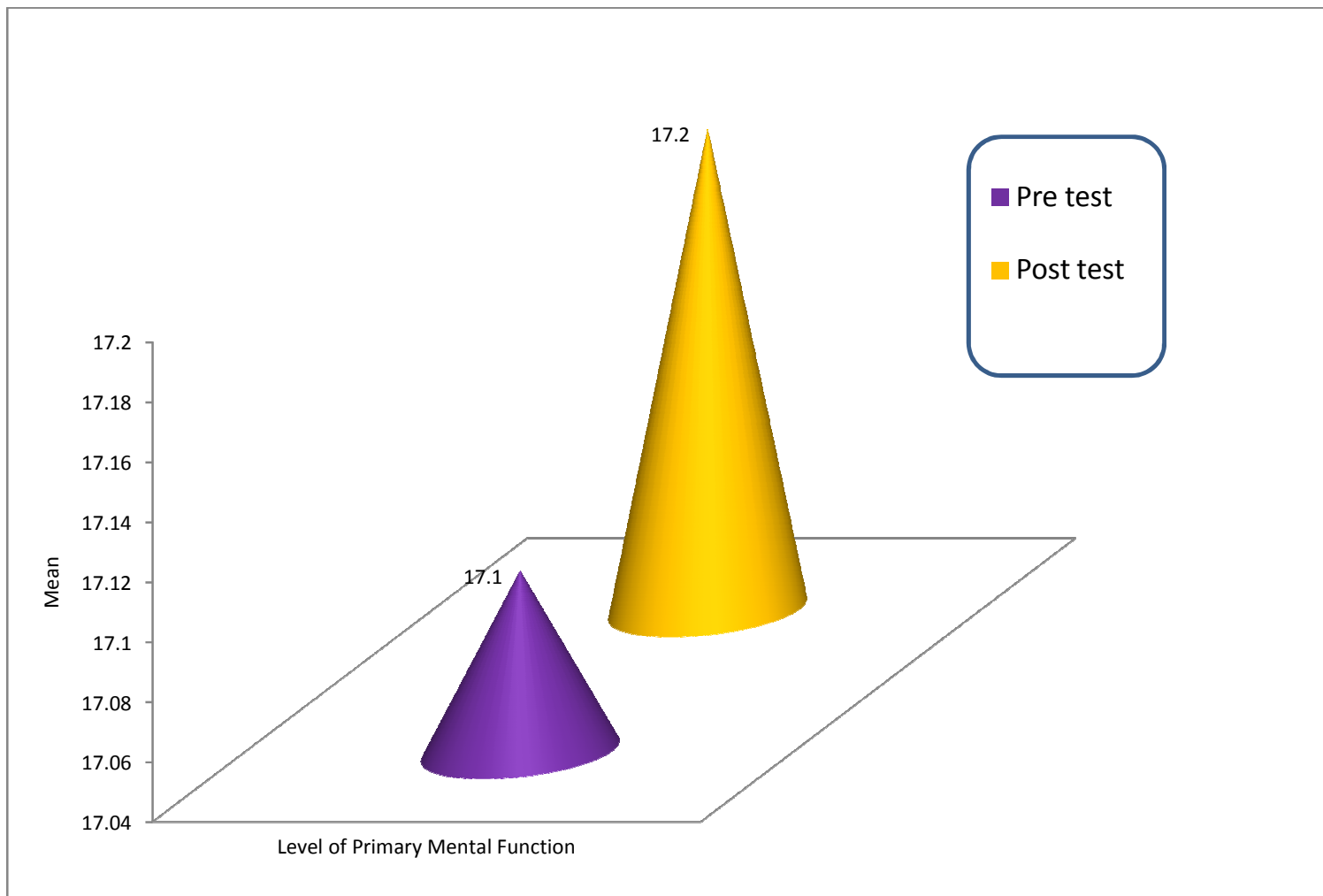


Fig 6: Mean Pre and Post Test Value on level of Primary Mental Function among Schizophrenics in Control Group

Table: 3.3

Mean, standard deviation and mean difference and ‘t’ value on post test level of primary mental function among Schizophrenics in Experimental and Control group.

N=40

Sl. No.	Group	Mean	Standard Deviation	Mean Difference	“t” value
1	Experimental group	19	2.61	1.8	2.307*
2	Control group	17.2	2.48		

*Significant at $p < 0.05$ level

Table 3.3 reveals that among experimental group the mean post test score was 19 with standard deviation 2.61 and in control group the mean post test score was 17.2 with standard deviation 2.48. The mean difference is 1.8. The obtained “t” value is 2.307 was significant at $p < 0.05$ level.

Hence the stated hypothesis was accepted. It is inferred that art therapy is effective on improving primary mental function among schizophrenics.

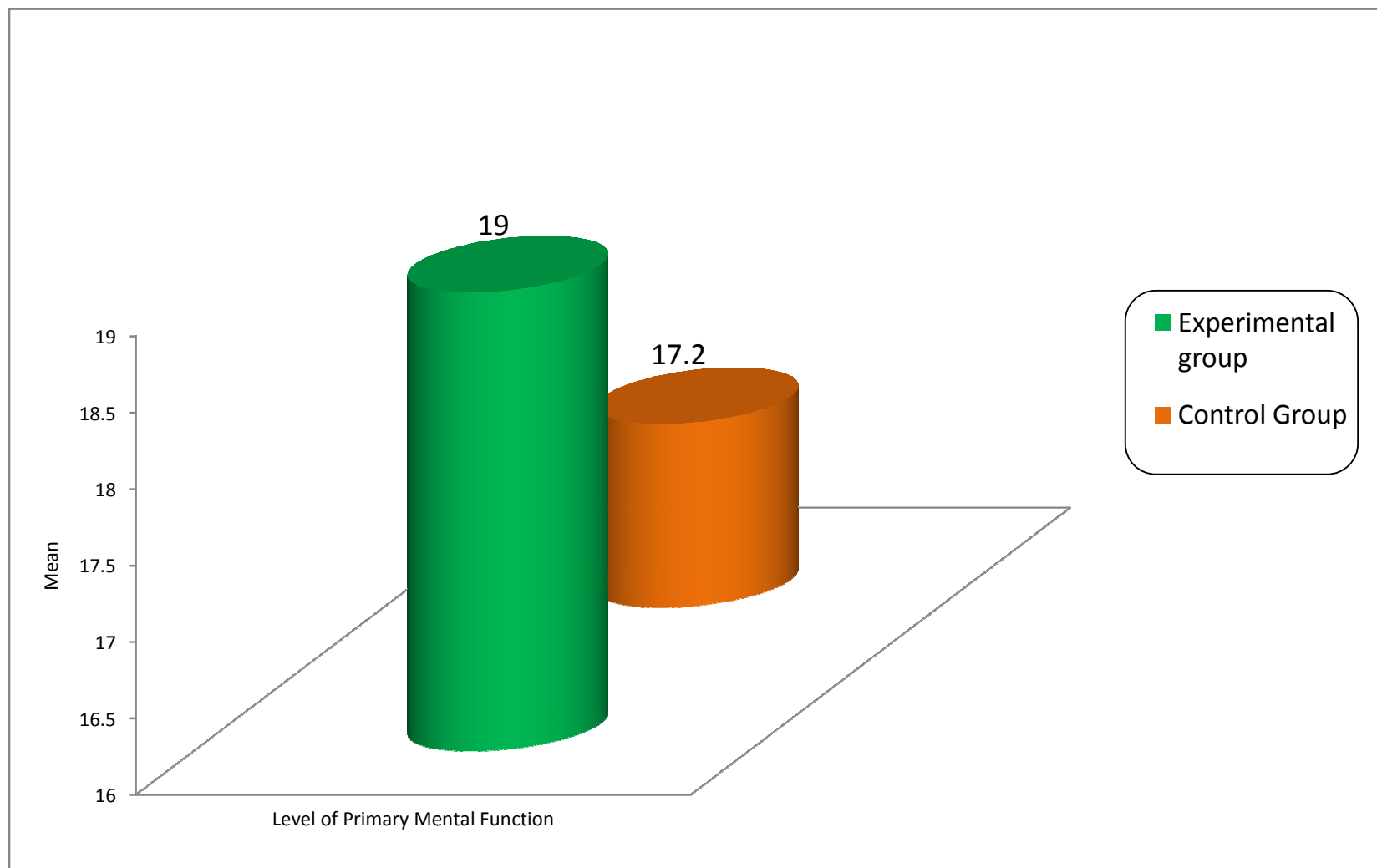


Fig 7: Mean Post Test Value on level of Primary Mental Function among Schizophrenics in Experimental and Control Group

SECTION IV:
DATA ON ASSOCIATION BETWEEN PRIMARY MENTAL
FUNCTION AND THEIR DEMOGRAPHIC VARIABLES

Table: 4.1

Frequency, Percentage and χ^2 Distribution of post test level of primary mental function among schizophrenics with their demographic variables in Experimental Group.

N = 20

Sl. No.	Demographic variables	No impairment		Mild impairment		Moderate impairment		χ^2 value
		n	%	n	%	n	%	
1	Age in years							3.79 Df = 4
	a) 31-40 years	0	0	2	10	6	30	
	b) 41-50 years	1	5	1	5	3	15	
	c) 51-60 years	0	0	3	15	4	20	
2	Gender							3.04 Df = 2
	a) Male	1	5	5	25	6	30	
	b) Female	0	0	1	5	7	35	
3	Marital status							4.83 Df = 6
	a) Single	1	5	2	10	9	45	
	b) Married	0	0	2	10	4	20	
	c) Divorced	0	0	1	5	0	0	
	d) Widow	0	0	0	0	1	5	
4	Type of family							2.2 Df = 2
	a) Nuclear	0	0	3	15	9	45	
	b) Joint	1	5	3	15	4	20	
5	Educational status							12.15 Df = 6
	a) illiterate	0	0	0	0	0	0	
	b) Primary	0	0	0	0	4	20	
	c) Secondary	0	0	2	10	5	25	
	d) Higher secondary	1	5	0	0	2	10	
	e) Graduate	0	0	4	20	2	10	
6	Previous occupation							6.66 Df = 6
	a) Unemployed	0	0	2	10	6	30	
	b) Self employed	0	0	2	10	5	25	
	c) Govt. employee	0	0	1	5	0	0	
	d) Pvt.employee	1	5	1	5	2	10	
7	Period of stay in centre							2.78 Df = 4
	a) <1 year	0	0	3	15	5	25	
	b) 1 to 3 years	1	5	1	5	5	25	
	c) Above 3 years	0	0	2	10	3	15	

In experimental group, after art therapy intervention, with regard to age, among 31 to 40 years, majority 6 (30%) of schizophrenics experienced moderate impairment of primary mental function, 2 (10%) had mild impairment. Among 41 to 50 years 1 (5%) had no impairment, 1 (5%) had mild impairment and 3(15%) had moderate impairment. Among 51 to 60 years, 3 (15%) of schizophrenics experienced mild impairment, 4 (20%) had moderate impairment. The obtained χ^2 value is 3.79 and which is not statistically significant at $P<0.05$ level. Hence it is inferred that age have no statistically significant association with primary mental function among schizophrenics. Hence the stated hypothesis H3 is not accepted.

With regards to gender, among male, majority 6 (30%) of Schizophrenics experienced moderate level of impairment, 5 (25%) had mild impairment and 1 (5%) had no impairment. Among female majority, 7 (35%) of schizophrenics experienced moderate impairment, 1 (5%) had mild impairment. The obtained χ^2 value is 3.04 and which is statistically not significant at $P<0.05$ level. Hence it is inferred that sex have no statistically significant association with primary mental function and the stated hypothesis H3 is not accepted.

With regards to marital status, among single 1 (5%) of schizophrenics experienced no impairment, 2 (10%) had mild impairment and 9 (45%) had moderate impairment. Among married 2 (10%) of schizophrenics experienced mild level of impairment. Among divorced 1 (5%) experienced mild level of primary mental function impairment. Among widow/widower 1 (5%) had moderate impairment. The obtained χ^2 value is 4.83 and which is statistically not significant at $P<0.05$ level. Hence it is inferred that marital statuses have no statistically significant association with primary mental function among schizophrenics and the stated hypothesis H3 is not accepted.

With regards to type of family, among nuclear family majority 9 (45%) of schizophrenics experienced moderate level of impairment, 3 (15%) had mild impairment. Among joint family, 1(5%) had no impairment, 3 (15%) had mild impairment and 4 (20%) had moderate impairment. The obtained χ^2 value is 2.2 and which is statistically not significant at $P<0.05$ level. Hence it is inferred that type of family have no statistically significant association with primary mental function among schizophrenics and the stated hypothesis H3 is not accepted.

With regards to educational status, among primary education, 4 (20%) of schizophrenics experienced moderate level of primary mental function impairment. Among secondary education 2 (10%) had mild impairment and 5 (25%) had moderate impairment. Among higher secondary education 1 (5%) had no impairment and 2 (10%) had moderate impairment. Among graduate 4 (20%) had mild impairment and 2 (10%) had moderate impairment. The obtained χ^2 value is 12.15 and which is statistically not significant at $P<0.05$ level. Hence it is inferred that educational status have no statistically significant association with primary mental function among schizophrenics and the stated hypothesis H3 is not accepted.

With regards to previous occupation, among unemployed majority 6 (30%) of schizophrenics experienced moderate impairment of primary mental function and 2 (10%) had mild impairment. Among self employed, 2(10%) had mild impairment and 5 (25%) had moderate impairment. Among Govt.employee 1 (5%) had mild impairment and among private employee, 1 (5%) had no impairment and mild impairment and 2 (10%) had moderate impairment. The obtained χ^2 value is 6.66and which is statistically not significant at $P<0.05$ level. Hence it is inferred that previous occupation have no statistically significant association with primary mental function among schizophrenics and the stated hypothesis H3 is not accepted.

With regards to period of stay in centre, among less than 1 year majority 5 (25%) of schizophrenics had moderate level of primary mental function impairment and 3 (15%) had mild impairment. Among 1 to 3 years, 1 (5%) had no impairment and mild impairment and 5 (25%) had moderate impairment. Among above 3 years 2 (10%) had mild impairment and 3 (15%) had moderate impairment. The obtained χ^2 value is 2.78 and which is statistically not significant at $P < 0.05$ level. Hence it is inferred that period of stay in centre have no statistically significant association with primary mental function among schizophrenics and the stated hypothesis H3 is not accepted.

Table: 4.2

Frequency, Percentage and χ^2 Distribution of Post test level of Primary mental function t among schizophrenics with their demographic variables in Control group.
N = 20

Sl. No.	Demographic variables	Mild impairment		Moderate impairment		χ^2 value
		n	%	n	%	
1	Age in years					1.44 Df = 2
	a)31-40 years	1	5	5	25	
	b)41-50 years	0	0	8	40	
	c)51-60 years	1	5	5	25	
2	Gender					0 Df = 1
	a)Male	1	5	9	45	
	b)Female	1	5	9	45	
3	Marital status					0.46 Df = 3
	a)Single	1	5	9	45	
	b)Married	1	5	6	30	
	c)Divorced	0	0	3	15	
	d)Widow	0	0	0	0	
4	Type of family					2.7 Df = 1
	a)Nuclear	0	0	11	55	
	b)Joint	2	10	7	35	
5	Educational status					0.96 Df = 3
	a)illiterate	0	0	0	0	
	b)Primary	0	0	2	10	
	c)Secondary	1	5	7	35	
	d)Higher secondary	1	5	5	25	
	e)Graduate	1	5	4	20	
6	Previous occupation					2.29 Df = 3
	a)Unemployed	1	5	5	25	
	b)Self employed	1	5	3	15	
	c)Govt. employee	0	0	1	5	
	d)Pvt.employee	0	0	9	45	
7	Period of stay in centre					0.44 Df = 2
	a)<1 year	0	0	3	15	
	b)1 to 3 years	1	5	8	40	
	c)Above 3 years	1	5	7	35	

In control group, with regards to age, among 31 to 40 years, majority 5 (25%) of schizophrenics experienced moderate impairment of primary mental function, 1 (5%) had mild impairment. Among 41 to 50 years 8 (40%) had moderate impairment. Among 51 to 60 years, 1 (5%) of schizophrenics experienced mild impairment, 5 (25%) had moderate impairment. The obtained χ^2 value is 1.44 and which is not statistically significant at $P < 0.05$ level. Hence it is inferred that age have no statistically significant association with primary mental function among schizophrenics. Hence the stated hypothesis H3 is not accepted.

With regards to gender, among male, majority 9 (45%) of Schizophrenics experienced moderate level of impairment, 1 (5%) had mild impairment. Among female majority, 9 (45%) of schizophrenics experienced moderate impairment, 1 (5%) had mild impairment. The obtained χ^2 value is 0 and which is statistically not significant at $P < 0.05$ level. Hence it is inferred that sex have no statistically significant association with primary mental function and the stated hypothesis H3 is not accepted.

With regards to marital status, among single 1 (5%) of schizophrenics experienced mild impairment, 9 (45%) had moderate impairment. Among married 1 (5%) of schizophrenics experienced mild level of impairment and 6 (30%) had moderate impairment. Among divorced 3 (15%) experienced moderate level of primary mental function impairment. The obtained χ^2 value is 0.46 and which is statistically not significant at $P < 0.05$ level. Hence it is inferred that marital statuses have no statistically significant association with primary mental function among schizophrenics and the stated hypothesis H3 is not accepted.

With regards to type of family, among nuclear family majority 11 (55%) of schizophrenics experienced moderate level of impairment. Among joint family, 2 (10%) had mild impairment and 7 (35%) had moderate impairment. The obtained χ^2 value is 2.7 and which is statistically not significant at $P < 0.05$ level. Hence it is inferred that type of family have no statistically significant association with primary mental function among schizophrenics and the stated hypothesis H3 is not accepted.

With regards to educational status, among primary education, 2 (10%) of schizophrenics experienced moderate level of primary mental function impairment. Among secondary education 1 (5%) had mild impairment and 7 (35%) had moderate impairment. Among higher secondary education 1 (5%) had mild impairment and 5 (25%) had moderate impairment. Among graduate 4 (20%) had moderate impairment. The obtained χ^2 value is 0.96 and which is statistically not significant at $P < 0.05$ level. Hence it is inferred that educational status have no statistically significant association with primary mental function among schizophrenics and the stated hypothesis H3 is not accepted.

With regards to previous occupation, among unemployed majority 5 (25%) of schizophrenics experienced moderate impairment of primary mental function and 1 (5%) had mild impairment. Among self employed, 1 (5%) had mild impairment and 3 (15%) had moderate impairment. Among Govt.employee 1 (5%) had moderate impairment and among private employee, 9 (45%) had moderate impairment. The obtained χ^2 value is 2.29 and which is statistically not significant at $P < 0.05$ level. Hence it is inferred that previous occupation have no statistically significant association with primary mental function among schizophrenics and the stated hypothesis H3 is not accepted.

With regards to period of stay in centre, among less than 1 year majority 3 (15%) of schizophrenics had moderate level of primary mental function impairment. Among 1 to 3 years, 1 (5%) had mild impairment and 8 (40%) had moderate impairment. Among above 3 years 1 (5%) had mild impairment and 7 (35%) had moderate impairment. The obtained χ^2 value is 0.44 and which is statistically not significant at $P < 0.05$ level. Hence it is inferred that period of stay in centre have no statistically significant association with primary mental function among schizophrenics and the stated hypothesis H3 is not accepted.

CHAPTER - V

DISCUSSION

CHAPTER V

DISCUSSION

This chapter deals with the discussion which was based on the findings obtained from the statistical analysis and its relation to the objectives of the study.

The basic aim of the present study was to assess the effectiveness of art therapy on primary mental function among schizophrenics. The study was conducted by using a quasi experimental pre test post test with control group design. Kongunadu Mananala Arakkattalai psychiatric centre was selected for conducting the study. Purposive sampling was used to select subjects for conducting the study. The sample size was 40 among which 20 were in interventional group and 20 were in control group.

Standardized Mini Mental State Examination tool was used to assess the primary mental function. The tool was administered through structured interview schedule. The standard scale consists of 5 items. The responses were analyzed by using descriptive statistics (mean, standard deviation, mean percentile, frequency and percentage) and inferential statistics (paired 't' test, and chi square test). Discussions on the findings were arranged based on the objectives of the study.

Objective 1: To assess the level of primary mental function among schizophrenics in experimental and control group.

The findings of this study revealed that the schizophrenics in interventional and control groups during the pre test majority (90%) experienced moderate level of impairment. But during the post test 30% of patients' experienced mild impairment in

experimental group 5% had no impairment in primary mental function and 65% had moderate impairment. And in control group 90% experienced moderate impairment, 10% had mild level of primary mental function impairment during the pre test and there was no change in the level of primary mental function observed during the post test.

Hypothesis 1: There is a significant difference in the level of primary mental function among schizophrenics.

In this study there is significant difference in the level of primary mental function among schizophrenics between control and interventional group. So this hypothesis was accepted.

The findings were supported by Arun Pongpaisal et.al (2013), evaluated the cognitive impairment in schizophrenia patients. Montreal cognitive test was used to assess the cognitive functions. The prevalence of cognitive impairment was 81.3%. The study concluded that the patients with schizophrenia showed a high prevalence of cognitive impairment.

The findings were also supported by Rajeev Krishnadas (2007) conducted a cross sectional study to findout the relationship of cognitive function in patient with schizophrenia. Results shown that persistent cognitive deficits are seen in patient with schizophrenia.

Objective 2: To assess the effectiveness of art therapy on primary mental function among schizophrenics.

The results of this study revealed that among the interventional group the mean pre-test score of primary mental function was 17.75with standard deviation 2.74.In

contrast, the mean post-test score of primary mental function was 19.2 with standard deviation of 2.61. The obtained 't' value 6.95 was significant at $p < 0.05$ level. Among the control group the mean pre-test score of primary mental function was 17.1 ± 2.42 and post test score was 17.2 ± 2.47 . The obtained 't' value 1.625 was not significant at $p < 0.05$ level.

Hypothesis 2: There is a significant difference in the level of primary mental function among schizophrenics in experimental group before and after art therapy.

This study finding reveals that there is significant difference in the level of primary mental function before and after art therapy among schizophrenics. So this hypothesis was accepted.

This findings were supported by Crawford MJ et.al (2012) investigated the effectiveness of art therapy among schizophrenics. The study concluded that group art therapy can be use as an adjunctive treatment for schizophrenia patients.

The findings were also supported by Baptisle et.al (2013) investigated the effectiveness of group art therapy for schizophrenia patients. The researcher included patients of 18 years of age and having clinical diagnosis of schizophrenia. The art therapy can be useful for schizophrenics.

Objective 3: To associate the post test level of primary mental function among schizophrenics with their selected demographic variables.

Chi square was calculated to find out the association between the post test scores of control and interventional groups with their selected demographic variables. These findings revealed that there was no significant association found between the post-test scores of control and interventional groups with selected demographic variables.

Hypothesis 3: There is an association between post test level of primary mental function among Schizophrenics with their selected demographic variables.

This study finding reveals that there is no association between the post test level of primary mental function among control and interventional group of schizophrenics with their selected demographic variables. So this hypothesis was rejected.

The findings were also supported by Bharati T Talreja et.al.,(2013) evaluated the primary mental function and its association with sociodemographic factors in schizophrenia patients. The study findings depict that persistent cognitive deficits are seen in patients with schizophrenia. Its correlation with sociodemographic factors showed that patients with >2 years of illness and belonging to urban habitat showed more cognitive dysfunction.

CHAPTER - VI

SUMMARY, CONCLUSION & RECOMMENDATIONS

CHAPTER VI

SUMMARY, CONCLUSION AND RECOMMENDATIONS

This chapter presents a brief account of the present study. It deals with the summary, conclusion and recommendations of the present study. Conclusions are drawn from the findings and the implications of the results for nursing practice, nursing education, nursing research and nursing administration are stated.

Summary

The present study was to evaluate the effectiveness of art therapy on primary mental function among schizophrenics in a selected psychiatric rehabilitation at Coimbatore. This study conducted by using quasi experimental pre test post test control group research design. This study aims to evaluate the effectiveness of art therapy on primary mental function among schizophrenics in a selected psychiatric rehabilitation centre, Coimbatore. The samples were selected by using non probability purposive sampling technique. The sample size was 40. The tool used for data collection was Standardized Mini Mental State Examination tool. The collected data was analyzed by means of descriptive and inferential statistics.

Objectives of the Study

- ✓ To assess the level of primary mental function among schizophrenics in experimental and control group
- ✓ To determine the effectiveness of art therapy on primary mental function among schizophrenics in experimental group.

- ✓ To associate the post test level of primary mental function among schizophrenics with their selected demographic variables.

Major Study Findings

- ✓ The study findings revealed that among 40 schizophrenics, majority of them belonged to 31-40 years of age, male, single, nuclear family, primary education, unemployed and 1-3 years of period of stay in rehabilitation centre.
- ✓ Regarding level of primary mental function during pre test in experimental and control group majority 18 (90%) had moderate and 2 (10%) had mild impairment of primary mental function. During post assessment in experimental group 1 (5%) had no impairment, 6 (30%) had mild impairment and 13 (65%) had moderate impairment of primary mental function.
- ✓ Regarding the effectiveness of art therapy on improving primary mental function among schizophrenics, the results shows that art therapy was effective in improving primary mental function among schizophrenics between pre test and post test score.

Conclusion of the Study

The main conclusion drawn from the present study was that most of the Schizophrenics had moderate and mild impairment of primary mental function in pre test and improved their level of Primary mental function in post test. This shows that the selected art therapy for the present study was effective in improving primary mental function among schizophrenics. Art therapy can be taught to the schizophrenics for improving primary mental function.

Implications of the Study

According to Tolsma (1995) the section of the research report that focuses on nursing implication usually includes specific suggestions for nursing practice, nursing education, nursing research and nursing administration. Nursing implication for this study is enlisted below:

Nursing Practice

Clinical nurse can:

- ✓ Learn accurate assessment of primary mental function by using Standardized Mini Mental State Examination tool.
- ✓ Learn the techniques of art therapy
- ✓ Impart art therapy to the schizophrenics in hospital.
- ✓ Understand the importance of art therapy as an adjuvant to the pharmacological therapy.
- ✓ Encourage the use of art therapy as a complementary therapy in improving primary mental function among schizophrenics
- ✓ Recognize the findings of the current study which can be used as a baseline to provide instructions to schizophrenics with primary mental function impairment.

Nursing Education

Nurse educators can:

- ✓ Teach the assessment of level of primary mental function and effectiveness of art therapy on improving primary mental function among schizophrenics, as an independent nursing intervention.

- ✓ Provide adequate exposure to students to a setting where art therapy is practiced.
- ✓ Teach art therapy using audio visual aids, group conference etc.

Nursing Research

Nurse researcher can:

- ✓ Encourage future research studies on the effectiveness of art therapy on Primary mental function among schizophrenics.
- ✓ Disseminate the finding through the conference, seminars, publications, National and international journal and World Wide Web.

Nursing Administration

Nurse administrator can:

- ✓ Organize in-service education program for the nurses on this complementary technique.
- ✓ Make cost effectiveness on the nursing care by reducing the usage of medications among schizophrenics
- ✓ Encourage nurses to conduct research on various complementary techniques.
- ✓ Provide opportunity for nurses to attend training program on art therapy.

Limitation

- ✓ The researcher could not be able to assemble the samples at regular time.

Recommendations

- ✓ Similar kind of study can be conducted in a large group.
- ✓ A comparative study can be done between the effectiveness of various non pharmacological measures and primary mental function among schizophrenics.
- ✓ Similar kind of study can be conducted in different setting.
- ✓ A longitudinal study can be undertaken to see the long effect of art therapy on primary mental function among schizophrenics.
- ✓ A descriptive study can be conducted on knowledge and attitude regarding art therapy.

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APPENDICES

APPENDIX - A

Letter Seeking Permission To Conduct Study

From

Ms.Chandni.C,
II Year Msc Nursing,
Sree Abirami College Of Nursing,
Coimbatore.

To

The Chairman,
Kongunadu Mananala Arakattalai :
Long term Psychiatric Care Centre,
Coimbatore.

Through

The Principal,
Sree Abirami College of Nursing,
Coimbatore.

Respected sir,

Sub : Conduction of Research-permission requested reg.

With due respect, I Ms.Chandni.C, II Year MSc Nursing student studying at Sree Abirami College of Nursing Coimbatore, require to conduct a research study as a part of the curriculum.

The research topic proposed is **"A study to assess the effectiveness of art therapy on primary mental function among persons with schizophrenia at selected rehabilitation centre, Coimbatore"**.

Therefore I humbly request you to grant me permission to conduct the above stated study at your esteemed institution. I assure you sir to abide to the rules and regulations of your institution. Further I wish to state that this study will be useful for the welfare of the inmates of your institution. Once again I request your kind permission.

Thanking You,

Coimbatore

Date :

Yours faithfully,

Chandni.c

For Principal
PRINCIPAL
Sree Abirami College of Nursing
Machegoundanpalayam Road,
Eachanari (Po),
COIMBATORE - 641 021.

Permission may be given
For Kongunadu Mananala Arakattalai
8/6/2015
Chairman

APPENDIX B

LIST OF EXPERTS CONSULTED FOR CONTENT VALIDITY

1. Dr. PRADEEP, MD,DPM
Psychiatrist
Kongunadu Mnanala Arakkattalai
Coimbatore
2. Dr. RAJ KUMAR MBBS,DPM
Psychiatrist
Sree Abirami Hospital
Coimbatore
3. Mr.SENTHIL KUMAR
Senior psychologist
Kasthurbha Gandhi Deaddiction Centre
Coimbatore
4. Prof.Dr. A.ARVIN BABU MSc(N), PhD,
Principal
Cheran College of Nursing,
Coimbatore
5. Prof. TAMIL SELVI MSc(N),
HOD of Mental Health Nursing,
KG College of Nursing,
Coimbatore

6. Mrs. JULIET SUJATHA MSc(N),

Associate Professor,

Ganga College of Nursing,

Coimbatore.

7. Mrs.SHERYN PRIYA MSc(N),

Associate Professor,

Royal College of Nursing,

Coimbatore.

8. Mrs. NARMADA, MA

Art Examiner,

Coimbatore Cultural Academy,

Coimbatore

APPENDIX - C

CONTENT VALIDITY CERTIFICATE

I hereby certify that I have validated the tool of Ms.Chandni.C, Ilyear MSc nursing student of Sree Abirami College of Nursing, Coimbatore, who has proposed to do a study on **"The effectiveness of art therapy on primary mental function among schizophrenics at selected psychiatric rehabilitation centre, Coimbatore."**

For Kongunadu Mananala Arakkattalai



Signature of the expert

Date: 29.5.2015

Place: Coimbatore -





COIMBATORE CULTURAL ACADEMY®

— SCHOOL OF ARTS & CULTURE —

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H.O.: No.266, Avinashi Road, Peelamedu, Coimbatore - 641 004. Cell : 98435-99990.

TO WHOM SOEVER IT MAY CONCERN

This is to certify that Ms CHANDNI.C had undergone a training program on art therapy from 1.8.15 to 31.8.15.

She has specialized in art therapy for improving primary mental function among patients with Schizophrenia and she is compete enough to practice this alternative therapy among Schizophrenics.

With regards

For CCA

Art Examiner



ALSO AT: SAIBABA COLONY, RAMANATHAPURAM; VADAVALLI, THUDIALUR

APPENDIX E

CONSENT FORM (ENGLISH)

Respected Sir / Madam

I am Ms.Chandni.c. I am doing my second year M.Sc., (N) in Sree Abirami College of Nursing. I am conducting a research on “A study to evaluate the effectiveness of Art therapy on Primary mental function among Schizophrenics in a selected Rehabilitation centre, Coimbatore”. I request your co-operation to complete my research. I assure you that you won't get any harm due to this intervention.

I Mr. / Mrs. (primary caregiver) was explained about the effectiveness of Art therapy on Primary mental function among Schizophrenics in a selected rehabilitation centre, Coimbatore by Ms.Chandni.C. She explained me the benefits of this intervention. I agree with this intervention of Art therapy and this study project whole heartedly.

Date:

Time

Yours faithfully,

APPENDIX-F

CERTIFICATE FOR EDITING

TO WHOMSOEVER IT MAY CONCERN

Certify that the dissertation paper titled, **“A study to assess the Effectiveness of art therapy on primary mental function among schizophrenics in a selected psychiatric centre at Coimbatore”** by Ms.Chandni.c. It has been checked for accuracy and correctness of English language used in presenting the paper is lucid, unambiuous, free of grammatical or spelling error and apt for the purpose.



JESSIE LAWSKAN.J

M.A., M.A.Ed., B.Sc., PGDCE., DSE.,

APPENDIX H
STRUCTURED INTERVIEW SCHEDULE
PART - 1
DEMOGRAPHIC VARIABLES

1. Age

- a) 31-40 years ☐
- b) 41-50 years ☐
- c) 51-60 years ☐

2. Gender

- a) Male ☐
- b) Female ☐

3. Marital Status

- a) Single ☐
- b) Married ☐
- c) Divorced /separated ☐
- d) Widow / Widower ☐

4. Type of family

- a) Nuclear ☐
- b) Joint ☐

5. Educational status

- a) Illiterate ☐
- b) Primary education ☐
- c) Secondary education ☐
- d) Higher secondary education ☐
- e) Graduate ☐

6. Previous occupation

- a) Unemployed ☐
- b) Self employed ☐
- c) Govt.employee ☐
- d) Pvt.employee ☐

7. Period of stay in hospital

- a) <1 year ☐
- b) 1 to 3 years ☐
- c) Above 3 years ☐

PART- II

STANDARDISED MINI MENTAL STATE EXAMINATION
(SMMSE)

Sl.No	(Correct = 1; Error = 0) – 10 points on this page	Correct	Error
1.	“What year is this?”		
2.	“What season of the year is this?” <i>(ok if adjacent given and we are in the last or first week of a season)</i>		
3.	“What is the date today?” <i>(ok if + or – one day)</i>		
4.	“What day of the week is this?”		
5.	“What month is this?” <i>(ok to use either name [eg. July] or number [7th]. Ok if adjacent month and the test day is first or last day of a month)</i>		
6.	“Can you tell me what country we are in?”		
7.	“What NZ province or region are we in?” <i>(i.e. Canterbury)</i>		
8.	“What City / Town are we in?” <i>(i.e. Christchurch; Auckland)</i>		
9.	“What is the name OR address of this building?” <i>(ask both; either is correct).</i> Or: “What street OR address is this?” <i>(Be liberal: X and Y doctor’s surgery; a street address or similar responses, but not generic responses such as doctor’s office, hospital etc)</i>		
10.	“What floor of the building are we on?” Or: “What room are we in?”		

Scoring, max 10 points_____

Sl.No	(Correct = 1; Error = 0) – 3 points on this page	Correct	Error
11.	<p>Registration</p> <p>“I am going to name three objects [<i>pause</i>].</p> <p>After I have said them [<i>pause</i>], I want you to repeat them back to me [<i>pause</i>].”</p> <p><i>[Read word list as shown below and wait for person to repeat]</i></p> <p>“Remember what they are [<i>pause</i>], because I am going to ask you to name them again in a few minutes.”</p> <p>Rules: <i>Say each word once only, pausing for one sec; make sure no distractions when stating; order of recall not important – score first reply; 20 sec allowed for reply; repeat objects for max of up to 5 trials only, if needed. Four alternate lists are shown. Use a different list every time the test is administered (circle the list used today).</i></p>		
	<p>Alt 1 Alt 2 Alt 3 Alt4</p> <p>“Apple” (<i>1 sec</i>) “Ball” “Bull” “Bus”</p>		
	<p>“Table” (<i>1 sec</i>) “Car” “War” “Rose”</p>		
	<p>“Penny” “Man” “Pan” “Door”</p>		
	<p>Number of trials for correct repetition (<i>qualitative information only, not part of the score for test</i>):</p>		

Scoring, max 3 points_____

Sl.No	(Circle number of points, 1-5) – 5 points on this page	Correct	Error
12.	<p>Working memory</p> <p>“Now I am going to give you a word [<i>pause</i>] and ask you to spell it forwards [<i>pause</i>] and backwards [<i>pause</i>]”</p> <p>“The word is WORLD [<i>pause</i>].”</p> <p>“First, can you spell it forwards?”(yes/no)</p> <p><i>Rules: Repeat if necessary and help subject spell word forward if necessary.</i></p> <p>“Now, spell it backwards.”</p> <p><i>Score backwards response per below (but zero if not spelt forwards correctly).</i></p> <p><i>Scoring: Minus one error for each omission, letter transposition (switching adjacent letters), insertion (inserting an extra or new letter), or misplacement (moving W, O, R, L, D by more than one space)</i></p> <p>Write what they spell backwards here:</p> <p><i>(and circle the one below if helps for scoring)</i></p>		
	DLROW		
	<p>Omission Transposition Insertion Misplacement</p> <p>DLOW DLORW DLRROW LROWD</p>		
	<p>Omis+Trans Omis+Insert Omis+Mispl</p> <p>DOLW DLTOW LOWD</p>		
	<p>Trans+Insert Trans+Mispl Insert+Mispl</p> <p>LRWWOD LRWOD LRWOWD</p>		
	<i>Other (insert here and score):</i>		

Scoring, max 5 points_____

Sl.No	(Correct = 1; Error = 0) – 10 points on this page	Correct	Error
	Recall: “What were the three objects I asked you to remember?” (<i>allow one minute</i>)		
13.	Alt 1 Alt 2 Alt 3 Alt4 “Apple” “Ball” “Bull” “Bus”		
14.	“Table” “Car” “War” “Rose”		
15.	“Penny” “Man” “Pan” “Door”		
16.	Show a standard, non-digital, wrist watch: “What is this called?” (<i>NOT ok to say “clock” or “time”; allow 10 sec</i>)		
17.	Show a standard pencil: “What is this called?” (<i>NOT ok to say “pen”; allow 10 sec</i>)		
18.	Articulate very carefully and clearly, “I would like you to repeat a phrase after me. The phrase is: “No ifs, ands, or buts.” (<i>only one trial; 10 sec to respond</i>) <i>Raters must be careful to enunciate the words properly as patients with high-frequency hearing loss often do not hear the “s” at the ends of the words.</i>		
19.	“Read the words on this page [pause], then do what it says.” Show plain paper with the instruction: “Close Your Eyes” (<i>correct if subject obeys in 10 secs</i>)		
20.	Three-Step Command. Hold up a piece of A4 paper in front of the subject, at your midline just out of reach, and say, “Take this paper in your R / L [<i>i.e., non dominant</i>] hand [pause], fold the paper once with both hands [pause], and put the paper down on your lap” <i>THEN push the paper forward within reach of subject (do not repeat</i>		
	[non dominant] hand (1 point)		
	Folds (1 point)		
	In lap (1 point)		

Scoring, max 10 points_____

Sl.No	(Correct = 1; Error = 0) – 2 points on this page	Correct	Error
21.	<p>Give the subject the pencil and say, “Write any complete sentence on that piece of paper for me” <i>(allow 30 sec)</i> <i>1 point if has subject, verb and object. Ignore spelling.</i></p>		
22.	<p>Constructional ability; Overlapping pentagons. Set a pencil, eraser and paper showing the design in front of the subject. Say, “Here is a drawing. Please copy the drawing on the same paper.” <i>Score correct (“1”) if the two five-sided figures intersect to form a four sided figure and (allowing for “wobble”) if all angles in the five-sided figures are preserved. Angles, not straight lines or otherwise perfect reproduction is needed.</i></p>		

Scoring, max 2 points_____

“Thank you. You did well.”

Score:

25 -30: No impairment

21-24: Mild impairment

10-20: Moderate impairment

<10 : Severe impairment

பிற்சேர்க்கை I

STRUCTURED INTERVIEW SCHEDULE (TAMIL)

பகுதி - I

பின்னனி விபரம்

1. வயது

- அ. 31-40 வயதிற்குள் ()
- ஆ. 41-50 வயதிற்குள் ()
- இ. 51-60 வயதிற்குள் ()

2. பாலினம்

- அ. ஆண் ()
- ஆ. பெண் ()

3. திருமண நிலை

- அ. ஒற்றை ()
- ஆ. கல்யாணமானவர் ()
- இ.விவாகரத்து ()
- ஈ.விதவை ()

4. குடும்பத்தின் வகை

- அ.தனிக்குடும்பம் ()
- ஆ.கூட்டுக் குடும்பம் ()

5. கல்வித்தகுதி

- அ.படிக்காதவர் ()
- ஆ.முதன்மை கல்வி ()
- இ.இரண்டாம் நிலை கல்வி ()
- ஈ.மேல்நிலை கல்வி ()
- உ.பட்டதாரி ()

6. முந்தைய பகுதி நிலை

- அ.வேலையற்றவர்கள் ()

ஆ.சுய வேலை	()
இ.அரசு வேலை	()
ஈ.தனியார் ஊழியர்	()

7. மறுவாழ்வு மையத்தில் தங்கியுள்ள காலம்

அ.ஒரு வருடத்திற்கு குறைவாக	()
ஆ.1 -3 வருடம்	()
இ.3 வருடத்திற்கு மேல்	()

பகுதி – II

STANDARDIZED MINI MENTAL STATE EXAMINATION (TAMIL)

சரியான கேள்விற்கு 1 மதிப்பெண், தவறு எனில் 0- 10 மதிப்பெண்

எண்	கேள்விகள்	சரி	தவறு
1.	இது எந்த வருடம்		
2.	இது எந்த காலம் (மிக சரியாக இல்லையென்றால் கூட, ஏறக்குறைய சரியான பதிலுக்கு மதிப்பெண் தரலாம்)		
3.	இன்று என்ன தேதி ? (ஒருநாள் முன்னதாகவோ அடுத்ததாகவோ கூட இருக்கலாம்)		
4.	இன்று என்ன கிழமை		
5.	இது எந்த மாதம் (ஒருநாள் முன், பின்னாக இருக்கலாம்)		
6.	நமது நாட்டின் பெயர் என்ன ?		
7.	நாட்டின் எந்த பகுதி இது ?		
8.	இப்போதுள்ள ஊரின் பெயர் என்ன ?		
9.	நீங்கள் இருக்கும் இந்த இடத்தின் பெயர் என்ன ? அல்லது தெருப் பெயர் என்ன ?		
10.	நாம் இருக்கும் அறை எண் என்ன ?		

மொத்த மதிப்பெண்கள் 10 -

எண்	சரியான பதிலுக்கு - 1 தவறு - 0-3 மதிப்பெண்கள் இந்த கேள்விக்கு	சரி	தவறு																								
11.	<p>நான் மூன்று பொருட்கள் பெயர்களை நான் சொல்வேன் இடைவெளி</p> <p>பின்பு நான் கேட்கும்போது, நீங்கள் அவைகளை திரும்பச் சொல்ல வேண்டும். (கீழே உள்ள பொருட்களின் பெயர்களை வரிசையாக படிக்கவும் அதை திரும்பக் கூறும் வரை காத்திருக்கவும்).</p> <p>நன்றாக நினைவு கொள்ளவும் (அடைவெளி) சில நிமிடம் கழித்து நான் கேட்கும் போது திரும்ப சொல்ல வேண்டும்.</p> <p>குறிப்பு :</p> <p>ஒவ்வொரு வார்த்தைக்கும் இடையில் ஒருவினாடி இடைவெளி தேவை. ஆரம்பிக்கும் போது எந்த குறுக்கிடும் இருக்கக்கூடாது. வரிசையாக திரும்பக் கூறவேண்டும் என்ற கட்டாயம் வேண்டும்.</p> <p>முதல் முறை கேட்கும் போது 20 வினாடி நேரம் தரலாம். ஆவசியமானால் 5முறை திரும்பக் கூறலாம். நான்கு பொருட்களின் பெயர்கள் கூறவேண்டும். இன்றைய பட்டியலை வட்டமிடவும்.</p> <table border="0"> <tr> <td>முதல் வரிசை</td><td>2ஆம் வரிசை</td><td>3ஆம் வரிசை</td></tr> <tr> <td>4ம் வரிசை</td><td></td><td></td></tr> <tr> <td>ஆப்பிள் (1வினாடி)</td><td>பந்து</td><td>எருமை</td></tr> <tr> <td>பஸ்</td><td></td><td></td></tr> <tr> <td>டேபிள் (1வினாடி)</td><td>கார்</td><td>போர்</td></tr> <tr> <td>ரோஜா</td><td></td><td></td></tr> <tr> <td>பைசா</td><td>மனிதன்</td><td>சேர்</td></tr> <tr> <td>கதவு</td><td></td><td></td></tr> </table>	முதல் வரிசை	2ஆம் வரிசை	3ஆம் வரிசை	4ம் வரிசை			ஆப்பிள் (1வினாடி)	பந்து	எருமை	பஸ்			டேபிள் (1வினாடி)	கார்	போர்	ரோஜா			பைசா	மனிதன்	சேர்	கதவு				
முதல் வரிசை	2ஆம் வரிசை	3ஆம் வரிசை																									
4ம் வரிசை																											
ஆப்பிள் (1வினாடி)	பந்து	எருமை																									
பஸ்																											
டேபிள் (1வினாடி)	கார்	போர்																									
ரோஜா																											
பைசா	மனிதன்	சேர்																									
கதவு																											

எண்	பக்கத்தில் மொத்த மதிப்பெண் 5	சரி	தவறு
12.	<p>நடைமுறை நினைவாற்றல்:</p> <p>நான இப்போது ஒருவார்த்தையை கூறப் போகிறேன். (இடைவெளி) பின்பு அந்த வார்த்தையை ஒவ்வொரு எழுத்தாக கூறவும் (இடைவெளி) தலைகீழாகவும் கூறவும் (இடைவெளி)</p> <p>அந்த வார்த்தை World (இடைவெளி) இப்போது உங்களால் எழுத்துக்களை கூற இயலுமா ஆம்/இல்லை</p> <p>குறிப்பு: எழுத்துக்களை அவர்கள் கூற முயற்சிக்கும்போது, தேவைப்பட்டால் நீங்கள் உதவி செய்யலாம்.</p> <p>இப்பவும் தலைகீழாக கூறவும். தலைகீழாக கூறும் போது கீழ்க்கண்ட முறையில் மதிப்பெண் தரவும் (இயலவில்லை எனில் 0 மதிப்பெண் தரவும்)</p> <p>மதிப்பெண்:</p> <p>எழுத்துக்களை விடுதல், மாற்றுதல் (அடுத்த எழுத்தை எழுதுதல்) அதிகப்படியாக சேர்த்தல் எழுத்துக்களை மாற்றி விடுதல் போன்றவற்றிற்கு 1 மதிப்பெண் கழிக்கவும்.</p>		
	DLROW		
	<p>விடுதல் இடம் மாற்றி எழுதுதல் சேர்த்தல் தவறான இடத்தில்</p> <p>எழுதுதல் DLOW DLORW DLRROW LROWD</p>		
	<p>விடுதல் + இடம் விடுதல் + சேர்த்தல் விடுதல் + தவறான இடத்தில் மாற்றி எழுதுதல் எழுதுதல் Dola DLTOW LOWD</p>		
	<p>மாற்றி எழுதுதல் + சேர்த்தல் மாற்றி எழுதுதல் + தவறான சேர்த்தல் + தவறான இடத்தில் எழுதுதல் இடத்தில் எழுதுதல் LRWWOD LRWOD LRWOWD</p>		

எண்	சரியான பதிலுக்கு – 1 0-10 மதிப்பெண்கள் இந்த பக்கத்தில்	சரி	தவறு
	நினைவுக்கு கொண்டுவருதல் நான் உங்களிடம் கூறிய மூன்று பொருட்களை கூறவும்		
13.	மாற்று மாற்று மாற்று மாற்று பரிசோதனை பரிசோதனை பரிசோதனை பரிசோதனை ஆப்பிள் பந்து எருது பஸ்		
14.	டேபிள் கார் போர் ரோஜா		
15.	பைசா மனிதன் சேர் கதவு		
16.	சாதாரண கைக்கடிகாரத்தை காட்டி “இது என்ன” என கேட்கவும் கடிகாரம் மற்றும் நேரம் என்றால் மதிப்பெண் தரலாகாது.		
17.	பெண்சிலைக் காட்டி இது என்ன ? என்று கேட்கவும் பேனா என்றால் மதிப்பெண் தரலாகாது		
18.	பரிசோதிப்பவர் தெளிவாக மற்றும் சரியாக கூறவேண்டும். நான் சொல்வதை கவனமாக கேட்டுக் கொண்டு பின்பு சொல்லவும். அப்படி இருந்தால் மற்றும் அல்லது என்ற வார்த்தைகளுக்கு இடமில்லை.		
19.	இந்தப் பக்கத்தில் உள்ள வார்த்தைகளை படிக்கவும் (இடைவெளி) பின் அதுபோல செய்யவும் ஒரு A4 பேப்பரில் பெரிதாக “உங்கள் கண்களை மூடவும்” எழுதிக்காட்டவும் சரியான 10 வினாடிக்குள் செய்யவேண்டும்.		
20.	3 நிலை உத்தரவுகள் : ஒரு A4 தாளை நோயாளி முன்பாக காட்டவும். பின் இந்தப் பேப்பறை உங்கள் வலது அல்லது இடது கையால் இரண்டாக மடிக்கவும்.பின் தங்கள் மடியில் போடவும் என்று கூறவும். நோயாளி பேப்பறை கை நீட்டி எடுக்கும் தூரத்தில் போடவும். எந்தகாரணம் கொண்டும் திரும்பக் கூறுவதோ செய்து காட்டுவதோ கூடாது.		
	அதிகம் பயன் படுத்தாத கையில் எடுத்தல் மதிப்பெண்	1	
	மடித்தல் 1 மதிப்பெண்		
	மடியில் போடுதல் 1 மதிப்பெண்		

எண்	இந்த பக்கத்தில் 2 மதிப் பெண்கள்	சரி	தவறு
21.	<p>30 வினாடி நேரத்திற்குள் “ஒரு பென்சில் பேப்பரை கொடுத்து” ஒரு முழு சொல் தொடரை இந்த துண்டு பேப்பரில் எழுதவும் என்று கூறவும்</p> <p>எழுத்துப்பிழை இருந்தால் பரவாயில்லை.</p> <p>ஆனால் பொருள், வினாச்சொல், சரியாக இருப்பின் 1 மதிப்பெண்</p>		
22.	<p>சரியான முறையில் பிரதி எடுத்தல் ஒன்றோடொன்று இணைந்த மங்களம் படத்தை அவர் முன்பாக காட்டவும் பேப்பர் பென்சில், ரப்பர் தரவும்.</p> <p>“இந்தப்படத்தை அதில் உள்ளது போலவே பிரதி எடுக்கவும்.</p> <p>ஐந்து முனைகளும் ஒன்றோடொன்று இணைந்திருப்பின் 1 மதிப்பெண் தரலாம்</p> <p>சரியாக இல்லையென்றால் மீண்டும் ஒருமுறை வரையச் சொல்லலாம்</p>		

அதிகப்பட்ச மதிப்பெண் : 2

மதிப்பெண்கள்:

பலவீனமின்மை 25 – 30

லேசான பலவீனத்திற்கு 21 – 24

மிதமானபலவீனத்திற்கு 10 – 20

தீவிரமான பலவீனத்திற்கு < 10

APPENDIX J

ART THERAPY INTERVENTION

A GUIDE TO PRACTICE ART THERAPY TO IMPROVE PRIMARY MENTAL FUNCTION

INTRODUCTION

Schizophrenia has a relatively unique set of cognitive impairments. Working memory is used for everything: remembering a phone number, comprehending a complex verbal passage, planning a talk, an outing, or a day's activities, and generating a novel strategy to solve a problem. In schizophrenia, it is consistently impaired. Long-term memory involving the acquisition and recall of new information may be impaired at relatively severe levels (Saykin et al., 1991). Patients with schizophrenia also show reduced mental speed and reaction time.

In present day many therapies are used to treat mental illness, where as art therapy is a therapeutic approach with the use of creative art. Various aspects of art therapy helping to improve primary mental function among persons suffering from schizophrenia.

DEFINITION

“Art therapy is the therapeutic use of art making within a professional relationship, by people who experience illness, trauma or challenges in living and by people who seek personal development”.

(American Art therapy Association-2002)

“Art therapy is a deliberate use of art making to address psychological and emotional needs and its benefits include fostering self expression, enhancing coping skills, managing stress and strengthening a sense of self and this translates in to improved cognition, communication and behaviour

(Cognitive dynamics foundation-2010)

“Prescribed substitutions of creative activity to replace neurotic symptoms and to strengthen defences successfully by the patient before illness becomes acute, and establish a prescribed relationship with the therapist”.

(Levick- 1967)

THEORY

The psychoanalytic approach to ego mechanisms of defence is the basis for treatment methods in art therapy (Naumburg, 1966).Naumburg maintains that spontaneous art expression releases unconscious material, the transference relation between patient and therapist plays an important role in this therapeutic process.

In 1958 a second theory of art therapy was formulated by Edith Kramer while recognizing the unconscious as a determinant for the human being's behaviour. She believes that the art of creating is healing that the art therapy provides a means of widening the range of human experience by creating equivalents for such experience (Ulman, 1961).

GOALS

According to Levick (1967),

- Providing a means for strengthening the ego.
- Providing a cathartic experience.
- Providing a means uncover anger.
- Offering an avenue to reduce guilt.
- Facilitating a task to develop impulse control.
- Introducing an experience to help develop the ability to integrate and relate.
- Helping patients/ clients with an incapacitating illness

PURPOSES

- Improve cognition and behaviour.
- To resolve conflicts and problem.
- Develop interpersonal skills.
- Manage stress.
- Increase the self esteem and self awareness.
- Achieve insight.

INDICATIONS

- Physical, cognitive and neurological problems
- Anxiety
- Depression
- Mental and emotional problems and disorders
- Substance abuse and other additions
- Emotional and social difficulties

- Emotional problems resulting from physical illness such as chronic kidney disease, cancer, diabetes and neurological diseases.
- Learning difficulties.

SETTINGS

- Art therapy conducted on a one to one basis in small or large groups, families.
- Art therapy office.
- Educational institutions
- Dining room of inpatient unit
- Basement of a general hospital
- Wellness centre.
- Clinics
- Public and community agencies

STEPS AND PROCEDURE

PREPARATION OF THE PATIENT

- Assess the primary mental function among schizophrenics by using Standardized Mini Mental State Examination tool.
- Establish good rapport with the patient.
- Provide background information about art therapy
- Make patient feel comfortable as possible.

STEPS

Self portrait technique

- Ask the patient to perceive themselves.

- Ask the patient to draw their perception on the paper
- Continue the technique for 30 minutes per day for 10 days



Drawing completion technique

- Provide a paper with dots to the patient.
- Ask the patient to incorporate the dots to a picture.
- Instruct the patient not to remove pencil from the paper till the end of the exercise.
- Continue the technique for 30 minutes per day for 10 days.



Painting technique

- Provide patient with a chart or a large sheet of paper with and without picture
- Ask the patient to paint on the chart

- Continue the technique for 30 minutes per day for 10 days.



- One technique was administered for 30 minutes in a day and repeated for consecutive 10 days. Each technique is given for 10 days, comprised a whole of 30 days
- Assess the primary mental function among Schizophrenics by using Standardized mini Mental State Examination tool.

CHAPTER – I

INTRODUCTION

“Art washes away every day dust from life”

(-Picasso-)

Background of the Study

The word Schizophrenia was coined in 1908 by the Swiss psychiatrist Eugen Bleuler. It is derived from the Greek word *skhizo* (split) and *phren* (mind). Schizophrenia refers to a psychotic condition characterized by the disturbances in thinking, emotion and volition and faculties in the presence of clear consciousness, which usually leads to social withdrawal.

Primary mental function refers to the individual's ability in orientation, attention, calculation, memory, recall and language. Primary mental function is moderately to severely impaired in patients with schizophrenia. This impairment is the prime driver of the significant disabilities in occupational, social and economical functioning in schizophrenia and an important treatment target. The profile of deficits in schizophrenia includes many of the most important human cognition such as orientation, concentration, attention, calculation and memory (Keefe et al. 2012). The Diagnostic and statistical manual of mental illness includes primary mental function as a domain that will need to be evaluated by the clinicians in the course of diagnostic assessment of schizophrenia (Keefe & Fenton 2007).

Primary mental function has been firmly established as a predictor of real world community functioning as well as the ability to perform everyday living skills (Green et al. 1996). Severely impaired performance on primary mental function in

schizophrenia revealed that almost all patients with schizophrenia are functioning below the level that would be expected in the absence of illness (Kefee.et.al 2011). Cognitive impairments and associated deficits in the ability to perform everyday living skills are highly related to live independently.

Reduction in quality of life strongly associated with primary mental function impairment. The effect of cognitive impairment on quality of life in patients with schizophrenia is quite substantial. While primary mental function impairment is a key component of reduced quality of life in schizophrenia (Mohamed et.al 2008).

The most important domains of primary mental function deficits in schizophrenia are memory, attention, concentration, language, problem solving etc. Impairments in primary mental function can result in difficulty in following social conversation, simple activities become laboured or impossible. This results in various aspects of outcomes including social deficits, communication functioning & skill acquisition (Green et.al 2000).

Medication is the mainstay of treatment for schizophrenia. However, 5-15% of people continue to experience symptoms in spite of medication and may also develop undesirable adverse effects (Johnstone 1998). Art therapy is one of the creative therapies that can be used in addition to medication for helping people with schizophrenia.

The British Association of Art Therapists (BAAT) (2007) define “Art therapy is a form of psychotherapy that uses art media as its primary mode of communication”. Art therapy is also unique in the way that art materials are utilised to make a link with and engage severely disturbed people in psychodynamic therapy (Deco 1998).

Art therapy is one of the complementary therapies which can benefit a wide spectrum of disorders, disabilities and diseases. It helps the people to improve their mental, emotional and physical states.

Art therapy offers unique insights due to nature of its three way process between the client, the therapist and the image or artefact. It provides patients with the opportunity to address issues or express themselves in ways that transcend spoken or written language. This will provides both therapist and client to a 'traditional' therapeutic environment of one-on-one or group discussions. By creating a work of art, an individual can ventilate his powerful emotions that have been internalized.

The main aim of this study is to assess the effectiveness of art therapy on primary mental function among Schizophrenics. Practicing art therapy will enable the schizophrenics to improve their primary mental function.

Need for the Study

World Health Organisation (WHO, 2013) states that schizophrenia affects about 24 million people across the world, with a worldwide prevalence rate of about 7%. WHO estimate that the incident rate of schizophrenia is about 3 per 10,000 people. In terms of global burden of disease and disability schizophrenia ranks among the top 10 disorders of the world wide.

According to the report of Mental Health Foundation on World Mental Health Day in the year of 2014, 26 million people around the world are suffering from schizophrenia.

An incidence study conducted in India (2012) stated that the annual incidence rate of schizophrenia is 4.4 and 3.8 per 1000 population for rural and urban

respectively. According to National Institute of Mental Health (2012) about 1.1 % of adults in India suffer from schizophrenia. An epidemiological study on prevalence of mental illness in India (2012) published in Indian Journal of Community Medicine reported that the prevalence rate of schizophrenia was 2.3 per 1000 population.

Epidemiological studies conducted in India revealed that prevalence rate of schizophrenia in Tamilnadu is 3.87 per 1000. (Rangasamy 2011et.al). A report published in the year of 2011 by The New Indian Express, one of the leading newspapers in India showed that an average of 50-60 schizophrenia patients visit Coimbatore Medical College Hospital every day. Among them 4-8 of them are new cases.

Severely impaired performance on cognitive test is the strongest evidence for the importance of primary mental function deficit in schizophrenia. A plethora of systematic research from the past 10 years highlights that primary mental function impairment is one of the most important barriers to recovery in patients with schizophrenia. It is estimated that 98% of patients with schizophrenia have primary mental function impairment. It has been well established that cognitive deficits in schizophrenia are predictive of impaired functioning.

American Art Therapy Association (AATA-2008) states, that Art therapy is a mental health profession that uses the creative process of art making to improve and enhance the physical, mental and emotional well-being of individuals of all ages. It is based on the belief that the creative process involved in artistic self-expression helps people to resolve conflicts, problems, develop interpersonal skills, manage behaviour, reduce stress, increase self-esteem, self-awareness and improve primary mental functions.

Art therapy integrates the fields of human development, visual art (drawing, painting, sculpture, and other art forms), and the creative process with models of counselling and psychotherapy.

Phil Richardson et.al (2007) evaluated the effectiveness of art therapy to improve primary mental function among schizophrenics. It revealed that art therapy can be used as an adjunctive treatment for schizophrenia.

Gordana mandiel et.al (2009) conducted a study on group art therapy as an adjunct therapy for the treatment to schizophrenics and study concluded that art therapy is a useful adjunctive therapy for schizophrenics.

The present study intends to improve the primary mental function such as orientation, memory, attention and calculation and language among schizophrenia patients and thereby improve their activities of daily living. Hence the investigator chose to research on art therapy, in order to improve the level of primary mental function among schizophrenics.

Statement of the Problem

Effectiveness of art therapy on primary mental function among schizophrenics in a selected psychiatric rehabilitation centre at Coimbatore.

Objectives

- ✓ To assess the level of primary mental function among Schizophrenics in experimental and control group
- ✓ To determine the effectiveness of art therapy on primary mental function among Schizophrenics in experimental group.

- ✓ To find out the association of post test level of primary mental function among Schizophrenics with their selected demographic variables.

Hypotheses

H1: There is a significant difference in the level of primary mental function among Schizophrenics in experimental and control group

H2: There is a significant difference in the level of primary mental function among Schizophrenics in experimental group before and after art therapy.

H3: There is an association in the level of primary mental function among Schizophrenics with their selected demographic variables

Operational Definitions

Effectiveness

Effectiveness refers to the extent to which art therapy has achieved the desired effect by improving the primary mental function as assessed by Standardized Mini Mental State Examination tool.

Primary Mental Function

Primary mental function refers to the Schizophrenic's responses to orientation, attention, calculation, registration, recall and language as assessed by the researcher using Standardized Mini Mental State Examination tool inferred as no impairment, mild, moderate and severe impairment.

Art therapy

Art therapy is a systematic approach used by making the patient to draw a self perceived picture, joining the given dots, and painting on a given picture for duration of 30 minutes in a day for a period of 30 consecutive days.

Schizophrenics

Refers to person suffering with mental disorder often characterized by abnormal social behaviour, failure to recognize what is real and associated with impairment of Primary mental function.

Delimitations of the Study

This study is delimited to,

- ✓ patients suffering from schizophrenia.
- ✓ effect of art therapy
- ✓ primary mental function among schizophrenics
- ✓ assessment by standardized Mini Mental State Examination tool.

Projected Outcomes

- ✓ This study will help the nurses to assess the primary mental function among Schizophrenics by using Standardized Mini Mental State Examination tool.
- ✓ Art therapy techniques can be beneficial in improving primary mental function.
- ✓ The findings of the study will help the nurses to understand the importance of art therapy on primary mental function among Schizophrenia patients.
- ✓ The study findings will help the nurses to motivate the Schizophrenics to practice art therapy to reduce primary mental function impairment.

CHAPTER -II

REVIEW OF LITERATURE

Review of literature is an important step in the development of any research project. It helps the investigator to analyze what is already known about the topic and to describe methods of inquiry used in earlier work including the success and shortcomings.

According to Polit and Hungler (2004), review of literature is a critical summary of research on a topic of interest, often prepared to put a research problem in the context.

This chapter deals with the collected information relevant to the present study through the published materials. These publications were the foundation to carry out the research work effectively.

Research literatures were reviewed and organized under the following headings:

- Studies related to primary mental function among Schizophrenics
- Studies related to Art therapy
- Studies related to effectiveness of Art therapy among Schizophrenics

Studies related to Primary Mental Function among Schizophrenics

Adeniran Oluburmi et.al (2014) conducted a study on cognitive functioning among patients with schizophrenia in a Nigerian Hospital. The objective of the study was to investigate correlation of cognition among schizophrenics. The 50 subjects were assessed by using positive and negative syndrome scale and clinical

global impression. Results shown that patient with schizophrenia has poor verbal response associated with negative syndrome. Study concluded that patient with negative schizophrenia may suffer more cognitive impairment.

Arun Pongpaisal et.al (2013) conducted a descriptive cross sectional study to evaluate the cognitive impairment in patient with schizophrenia in Thai. In that the main aim of the study was to examine the prevalence of cognitive impairment and associated factors in patients with schizophrenia. Montreal cognitive test was used to evaluate cognitive functions. Associated factors such as age of onset, type of antipsychotics were collected from medical records. The data were analysed by using descriptive and inferential statistics. The findings revealed that, the prevalence of cognitive impairment was 81.3%.The study concluded that the Thai patients with schizophrenia showed a high prevalence of cognitive impairment.

Bharati T Talreja et.al (2013) conducted a study to evaluate the cognitive function in schizophrenia and its association with socio demographic factors. Cognitive function in 100 patients with Schizophrenia as per DSM IV edition in the outpatient department of psychiatric unit were assessed by using Addenbrook's cognitive examination rating scale and mini mental state examination. The data were analysed by using chi square and 't' test. Result showed that, 70% of patient with schizophrenia found to have primary mental function dysfunction for attention, concentration, memory and language.

Andre Almen et.al (2012) conducted a meta analysis study to assess the memory impairment among schizophrenics. The objective of the study was to examine the exact magnitude and pattern of impairment. The findings revealed a significant and stable association between schizophrenia and memory impairment.

The composite effect size for recall performance was large. Recognition showed less, but still significant, impairment. The magnitude of memory impairment was not affected by age, medication, duration of illness, patient status, severity of psychopathology, or positive symptoms. Negative symptoms showed a small but significant relation with memory impairment. Researcher concluded that there is a significant impairment in schizophrenia. The impairment was stable, wide ranging, and not substantially affected by potential moderating factors such as severity of psychopathology and duration of illness.

Rajeev Krishna Das et.al (2007) conducted a cross sectional study to find out the relationship of cognitive function in patient with schizophrenia in India. The objective of the study was to compare the neurocognitive function in 25 patients of schizophrenics in remission was compared to 25 normal controls and to determine the relationship between cognition and functional disability. The study was conducted in the psychiatric unit of general hospital in Mumbi. Subjects were administered a battery of cognitive tests . correlation analysis was used to find out the relationship between illness factors, cognitive function and disability. Results showed that patient with schizophrenia showed significant deficits on test of attention, concentration, verbal and visual memory. The study concluded that persistent cognitive deficits are seen in patients with schizophrenia.

Heidi Bjoeorge et.al (2005) conducted a study to evaluate the significant changes in primary mental function from acute phase to nine month follow up. The samples comprised 36 patients with schizophrenia admitted to psychiatric unit for an acute psychotic episode. Primary mental function assessed by positive and negative syndrome scale at the baseline and follow up. Results showed that cognitive

impairment is there in schizophrenia patients and symptoms significantly changes from acute phase to 9 months later.

Sonia Beatriz et.al (2005) conducted a study to evaluate the cognitive function in Brazilian right hander's schizophrenia patients and healthy volunteers. 25 right handed schizophrenia and 25 young adults were included in the cross sectional design. The manual preference was evaluated with the Edinbargh Handedness Inventory and Cognitive performance with a series of new psychological tests. Results shown that , the right handed schizophrenia showed poorer performance in cognitive tests. Cognitive deficits were present in 60% of the samples. The findings suggested a more diffuse impairment in cognitive function among right handed schizophrenics.

Michel F Green et.al (2004) conducted a longitudinal study to evaluate primary mental function and functional outcome in schizophrenia in U.S. 18 longitudinal studies evaluated to find out the relationship between cognition and community outcome in schizophrenia. Cognitive deficits performance measures are related to the daily activities of patient with schizophrenia. Results of these studies revealed that considerable support for longitudinal association between primary mental function and community outcome in schizophrenia.

Studies related to Art Therapy

Potash S et.al (2014) conducted a quasi experimental study on art therapy and reduction in death anxiety and burnout in end – of – life care workers, among 129 workers in China. The samples were selected by using purposive sampling. The data was collected by using Hamilton Anxiety Rating Scale. The study revealed that art therapy reduces burnout among end – of – life care workers by enhancing emotional awareness and regulation, fostering meaning making and promoting reflection on

death. The study concluded that art therapy should be practiced by the end – of – life care workers.

Harel S et.al (2013) conducted an experimental study on effectiveness of intensive art therapy in youth with poorly controlled Type 1 Diabetes Mellitus, among 29 samples in Britain. The samples were selected by using convenient sampling. The data was collected by using Blood Sugar test. The study reported that improvement in glycemic control was seen in 56% of the case group and 23% of control group. The study concluded that intensive art therapy can recommend to those with poor glycemic control.

Bebee A., Gefland E W., Bender B., (2010) conducted a randomized trial on effectiveness of art therapy on children with asthma, among 22 children in Spain. The samples were selected by using randomization. The data was collected by using Hamilton Anxiety Rating Scale. The study revealed that after 6 months, the group maintained positive changes relative to the control group including less worry and anxiety. The study concluded that the art therapy is beneficial for children with asthma.

Madden J R et.al (2010) conducted a study on creative art therapy on improving quality of life for paediatrics with brain tumour receiving chemotherapy, among 16 children in Canada. The sample were selected by using purposive sampling. The data was collected by using Faces scale. The study revealed that patients were more excited, happier and less nervous. The study concluded that art therapy revealed positive experiences.

Thyme K E et.al (2009) conducted a randomized control clinical trial on individual brief art therapy can be helpful for women with breast cancer, among 41 women in France. The sample were selected by using simple random sampling technique. The data was collected by using Hamilton anxiety rating scale. The study revealed that significant lower rating of depression, anxiety, somatic symptoms and less general symptoms for the art therapy group when compared with the control group. The study concluded that art therapy has a long term effect on the crisis following the breast cancer and its consequences.

Bar-Sela G et.al (2007) conducted an experimental study on effect of art therapy on depression and fatigue levels in cancer patients on chemotherapy, among 60 cancer patients in Sydney. The samples were collected by using simple random sampling. The data was collected by using Beck Depression Inventory. The study revealed that art therapy is worthy in the treatment of cancer patients with depression or fatigue during chemotherapy treatment. The study concluded that art therapy should be included in the training programs of health workers.

David Gussak et.al (2007) conducted a study on the effectiveness of art therapy in reducing depression among prison population. Sample of the study was male adult prison in rural Florida with experimental design. 48 inmates chosen by the mental health counsellor received art therapy for a 4 week of period, two group sessions per week. The range of participants was 21 to 63 years. They all had an axis-I diagnosis such as dysthymia or BPAD, mania. All attended counselling sessions on the day treatment unit and were expected to attend art therapy session on the day as a point of their treatment. 51% received antipsychotics. Tools like baseline depression inventory, survey developed tools were administered twice, once before intervention and once after, with the scores compared to ascertain therapeutic change. Results

shown that 16 members of the experimental group and 13 members of control group completed a pre and post BDI II assessment. Researcher concluded that the art therapy was beneficial to the inmate population of the prison.

Oster I et.al, (2006) conducted a randomized controlled study on effect of art therapy on coping resources in women with breast cancer, among 41 women with non-metastatic primary breast cancer in Berlin. The sample were selected by using simple random sampling. The data was collected by using Cancer Behaviour Inventory. The study revealed that there was an increase in coping resources among women with breast cancer after taking part in the art therapy intervention. The study concluded that individual art therapy provided by a trained art therapist in a clinical setting can give beneficial support to women with primary breast cancer undergoing radiotherapy, as it can improve their coping resources.

Banks S et.al (2004) conducted a quasi experimental study on the effects of directed art therapy on behaviour of young children with disabilities, among 23 children in New Jersey. The subjects were selected by using purposive sampling. The data was collected by using Vineland Adaptive Scale. The study revealed that the directed art therapy had a larger effect on the social condition of the children. The study concluded that the art therapy can be use by preschool and other teachers to improve the behaviour of the young children.

Studies related to Art Therapy in Schizophrenics

Baptisle et.al (2013) conducted a group art therapy for schizophrenia. The study aimed to investigate whether art therapy was more effective for specific subgroups of patients. They included patients of 18 years of age and having clinical

diagnosis of schizophrenia. Study concluded that the identification of patients with schizophrenia who may benefit most from group art therapy remain elusive.

Crawford MJ et.al (2012) conducted a randomized controlled trial study on group art therapy as an adjunctive treatment for people with schizophrenia. The objective of the study was to examine the effectiveness and cost effectiveness of referral to group art therapy along with standard care. The study concluded the group art therapy can be use as a adjunctive treatment for schizophrenia along with standard care and also need further investigation in this field.

Phil Richardson et.al (2007) conducted a randomised controlled trial on art therapy as an adjunctive treatment for schizophrenia. The aim of the study was to conduct the first explanatory RCT of group interactive art therapy as an adjunctive treatment for schizophrenia. The outcomes of 43 patients randomized to 12 sessions of AT were compared with those of 47 who received standard psychiatric care. Patients were assessed on a range of measures of symptoms, social functioning and quality of life at pre- and post-treatment and six-month follow-up. Results showed that art therapy produced a statistically significant positive effect on negative symptoms (assessed by Scale for the Assessment of Negative Symptoms) though had little and non-significant impact on other measures. The study concluded that art therapy can be use as an adjunctive treatment for schizophrenia.

Gordana Mandic et.al (2009) conducted a study on group art therapy as an adjunct therapy for the treatment for the treatment to schizophrenics in day hospital. Case report presented clinical observations of group art therapy of two schizophrenia patient during integrative therapy in day hospital. Researcher modified the original “synallactic collective image technique”. The group is open,

heterogeneous meets once in a week and discuss on exhibited drawings, drawn by free associations. The patients' drawings and group protocol showed clinical improvement by lowering depressive themes, more human figures and self confidence. The researcher concluded that group art therapy enables visual expression of emotions, perceptions and cognitions develop creative potentials and support within the group, thus facilitating the integrative therapeutic process schizophrenics. It may be useful adjunctive therapy for schizophrenic patients.

Rachel Ruddy et.al (2009) conducted a study on art therapy for schizophrenia. The objective of the study was to review the effects of art therapy as an adjunctive treatment for schizophrenia compared with standard care and other psychosocial interventions. The selection criteria for the study was all randomized controlled trials that compared art therapy with standard care and other psychosocial interventions for schizophrenia. Result showed a small but significant difference favouring the art therapy group. The researcher concluded that randomized studies are possible in this field, but further evaluation of the use of art therapy for serious mental illness is needed as its benefits or harms remain unclear.

CONCEPTUAL FRAME WORK

J.W KENNY'S OPEN SYSTEM MODEL (1999)

Tabot (1995) stated that 'A conceptual framework is a network of interrelated changes that provide a structure for organizing and describing the phenomenon of interest'. Research studies are based on the theoretical frame work that facilitates visualizing the problem and places the variables in a logical context.

A conceptual framework or model is made up of concepts, which are the mental images of the phenomenon. These concepts are linked together to express the relationship between them. A model is used to denote symbolic representation of concepts. One of the important purpose of the conceptual framework is to communicate clearly the interrelationship of various concepts. It guides on investigator to know what data needs to be collected and give direction to the entire research process (Kerlinger K.N, 1993).

The present study aim to evaluate the effectiveness of art therapy on primary mental function among schizophrenics. Conceptual framework of this study was developed based on "J.W Kenny's Open System Model". According to J.W Kenny, all living system are in continuous exchange of energy, matter and information, which results in varying degree of interaction with environment from which the system receives input and gives back output in the form of matter, energy and information. System model consist of three phases input, throughput and output.

Input

Based on J.W Kenny's input can be matter, energy and information from the environment.

In the present study environment refers to the psychiatric rehabilitation centre and input refers to schizophrenics with impaired primary mental function (with their selected demographic variables).

Throughput

According to J.W Kenny's the matter, energy and information are continually processed through the system which also called complex transformation, known as throughput. Process is the form of input that is energy and information for the maintenance of homeostasis of the system.

In the present study the process is the art therapy intervention for 30 minutes per day for 30 days in experimental group but control group received no intervention.

Output

J.W Kenny noted after processing the input, the system returns to the output (matter, energy and information) to the environment in an altered state. Change is the feature of the process that is observable and measurable as output. This should be different that which is entered in to the system. In the present study the difference is the improvement in the primary mental function among schizophrenics and no improvement in control group in post test.

Feedback

According to him, for feedback information of environmental responses to the system in adjustment, correction and accommodation to the interaction with the environment. The effectiveness of art therapy in improving primary mental function considered as the difference observed and expected.

CHAPTER - III

METHODOLOGY

Methodology deals with the research approach, research design, variables, setting of the study, population, sample size, sampling technique, criteria for selection of the sample, development of the tool, description of the tool, scoring procedure, validity, reliability, pilot study, data collection procedure, plan for data analysis and protection of human rights.

According to Polit and Hungler (2004) “Research Methodology refers to the researcher ways of obtaining, organizing and analyzing data.”

Research Approach

Polit and Hungler, (2004) defined the research approach as a general set of orderly discipline procedure used to acquire information.

A quantitative approach was used in this study to evaluate the effectiveness of art therapy on level of primary mental function among schizophrenics.

Research Design

Polit and Hungler, (2004) defined research design as overall plan for addressing a research questions, including specification for enhancing the study integrity.

A quasi experimental pre- test post -test design with control group was chosen for analyzing the effectiveness of art therapy on primary mental function among schizophrenics.

The diagrammatic representation of the research design given as follows:

Group	Pre Test	Intervention	Post test
Experimental	O1	X	O2
Control	O3	-	O4

Key:

O1 : Pre-test assessment of primary mental function in experimental group.

O2 : Post-test assessment of primary mental function in experimental group

X : Art therapy

O3 : Pre-test assessment of primary mental function in control group.

O4 : Post-test assessment of primary mental function in control group.

Variables

Polit and Hungler, (2005), defined variable as an image, perception or concept that is capable of measurement – hence capable of taking on different values – is called a variable.

Dependent variable : Primary mental function

Independent variable : Art therapy.

Setting of the Study

Polit and Hungler, (2005), stated that the physical location and condition in which data collection has taken place in a study is the setting of the study.

The study was conducted in Kongunadu Mananala Arakkatalai psychiatric centre at Coimbatore. It is a 75 bedded psychiatric hospital which includes all the cases of mental illness, majority are the patients with schizophrenia. Nearly 10 cases

per month admitted for the treatment of schizophrenia. It is a long term psychiatric care centre.

Population

According to Polit and Hungler, (2005) “A population is the entire aggregation of cases in which a researcher is interested.”

Target Population:

The Target population selected for the study was Schizophrenics with impaired primary mental function.

Accessible Population:

In this present study the accessible population is schizophrenics with mild & moderate level of primary mental function in Kongunadu Mananala Arakatalai psychiatric Centre at Coimbatore.

Sample

According to Polit and Hungler (2005), sample is a subset of population selected to participate in research study.

Total number of 40 samples was selected for the study, in which 20 samples were included in experimental group and 20 samples were in control group.

Criteria for Sample Selection

Inclusion criteria

- Clients who are diagnosed as schizophrenics
- Schizophrenics with mild and moderate impairment of primary mental function
- Clients who can understand Tamil or English

Exclusion Criteria

Schizophrenics ,

- With associated disorder like mental retardation, personality disorder etc
- With severe and No impairment of primary mental function
- Who are not willing to participate.

Sampling Technique

Polit and Hungler, (2005) defined “sampling technique is the process of selecting a portion of the population to represent the entire population.”

In this study the samples were selected by adopting non probability purposive sampling technique. 40 samples were selected based on inclusion and exclusion criteria.

Development of the Tool

Treece and Treece (1986), emphasized that the instrument selected in research should as far as possible be the vehicle that would best obtain data for drawing conclusion pertinent to the study.

The Standardized Mini Mental State Examination was used as instrument to measure the level of primary mental function among schizophrenics. The instrument was developed in English after an extensive review of literature and experts opinion. It was translated into Tamil by language experts.

Description of the Tool

The instrument consists of two sections

Part I

Consists of demographic variables of Schizophrenics such as age, gender, marital status, type of family, educational status, previous occupation, and period of stay in the hospital.

Part II

Consists of Standardized Mini Mental State Examination tool used to assess the level of impairment of primary mental function among schizophrenics. The Standardized Mini Mental State Examination Scale was developed by Molloy et.al in (1991) consists of 5 items. The tool is assessed for answer either ‘correct’ or ‘error’ response. Each correct answer was given a score ‘1’ and wrong answer ‘0’. Hence, the maximum possible score was ‘30’ and minimum possible score was ‘0’.

Score Interpretation

- 25 – 30 : No impairment
- 21 - 24 : Mild impairment
- 10 - 20 : Moderate impairment
- <10 : Severe impairment

Validity

According to Nancy Burns (2011) “the validity of an instrument is the determination of the extent to which an instrument actually reflects the abstract construct that is being examined.”

Validity of the tool was obtained from experts. Their valuable suggestions were taken into consideration and corrections were made accordingly. The tool was found to be valid.

Reliability

According to Polit and Hungler (2004), “Reliability of an instrument is the consistency with which it measures the target attribute.”

In this study, a Standardized Mini Mental State Examination tool was used to assess the level of impairment of primary mental function among schizophrenics.

Pilot Study

Polit and Nancy (2005) denote that there should be a small scale version or trial run done in preparation for major study.

The pilot study was conducted in Udhiam Psychiatric Rehabilitation centre at Coimbatore. The data were analyzed to find out the feasibility of statistical methods. The pilot study found to be feasible and it is very useful in testing the instrument.

Data Collection Procedure

According to Polit and Hungler (2005) “data collection is the gathering of information needed to address a research population.”

The data collection procedure was done for 30 days in Kongunadu Mananala Arakatalai psychiatric rehabilitation centre, Coimbatore. Initially the permission was obtained from the administrative authority (the director) of the centre. Screening of patients done by using Standardized Mini Mental Status Examination tool, among that 40 sample were selected with mild and moderate impairment of primary mental function. Twenty subjects were allotted to experimental group and remaining to control group. The subjects were selected by non probability purposive sampling technique. The nature and purpose of the study was explained and consent obtained from the sample.

On the same day the pre test was done for the samples by using Standardized Mini Mental State Examination. From 2nd day, intervention of art therapy was explained and taught to subjects of the experimental group. Art therapy program was given as intervention for 30 consecutive days after the pre test. The duration of intervention was for 30 minutes per day. The investigator assessed the level of primary mental function on the 30th day after intervention program for both experimental and control group.

Plan for Data Analysis

The data were analysed by both descriptive and inferential statistics. The data related to demographic variables were analysed by using descriptive statistics (frequency, percentage). The level of primary mental function was assessed by using descriptive measures (mean, standard deviation). The effectiveness of art therapy on primary mental function among schizophrenics was analyzed by paired “t” test and unpaired ‘t’ test. The association of post test score of primary mental function with their demographic variables were assessed by using chi square test.

Protection of Human Rights

The study was conducted after the approval of research committee of the college. The nature and purpose of the study was explained to the health care personnel involved. Permission was obtained from the authority of the study centre. The consent was obtained from the study participants and assurance was given to them that the confidentiality would be maintained throughout the study. The art therapy technique was taught and administered to all the other schizophrenics of the centre after the post test to overcome the ethical issue.

CHAPTER IV

DATA ANALYSIS AND INTERPREATTION

The chapter deals with the analysis and interpretation of data collected from schizophrenics to evaluate the effectiveness of art therapy on primary mental function among schizophrenics. The purpose of the analysis is to reduce the data manageable and interpretable form, so that the research problems can be studied and tested.

Polit and Beck, (2003) has defined that the data analysis as “The systematic organization, synthesis of research data and testing of research hypothesis using those data.”

The analysis and interpretation of this study was based on the data collected through structured interview method from the patient’s with schizophrenia. The results were computed using descriptive and inferential statistics.

The study findings are presented in sections as follows:

- Section - I : Data on demographic variables of Schizophrenics.
- Section – II : Data on level of impairment primary mental function among Schizophrenics.
- Section –III : Data on effectiveness of Art therapy on level of primary mental function.
- Section – IV : Data on association between level of primary mental function among Schizophrenics with their selected demographic variables.

SECTION I :
DATA ON DEMOGRAPHIC VARIABLES OF
SCHIZOPHRENICS

Table: 1

Frequency and Percentage distribution of schizophrenics with their selected
Demographic variables in Experimental and Control group.

N= 40

Sl. No.	Demographic Variables	Experimental group		Control group		Total	
		n	%	n	%	n	%
1	Age						
	a) 31 to 40 years	8	40	6	30	14	35
	b) 41 to 50 years	5	25	8	40	13	32.5
	c) 51 to 60 years	7	35	6	30	13	32.5
2	Gender						
	a) Male	12	60	10	50	22	55
	b) Female	8	40	10	50	18	45
3	Marital status						
	a) Single	12	60	10	50	22	55
	b) Married	6	30	7	35	13	32.5
	c) Divorced	1	5	3	15	4	10
	d) Widow/widower	1	5	0	0	1	2.5
4	Type of family						
	a) Nuclear	12	60	11	55	23	57.5
	b) Joint	8	40	9	45	17	42.5
5	Educational status						
	a) Illiterate	0	0	0	0	0	0
	b) Primary	4	20	2	10	6	15
	c) Secondary	7	35	8	40	15	37.5
	d) Higher secondary	3	15	6	30	9	22.5
	e) Graduate	6	30	4	20	10	25
6	Previous occupation						
	a) Unemployed	8	40	6	30	14	35
	b) Self employed	7	35	4	20	11	27.5
	c) Govt. employee	1	5	1	5	2	5
	d) Pvt. employee	4	20	9	45	13	32.5
7	Period of stay in centre						
	a) <1 year	8	40	3	15	11	27.5
	b) 1 to 3 years	7	35	9	45	16	40
	c) Above 3 years	5	25	8	40	13	32.5

Table 1 reveals that with regards to age, the majority of the patients with schizophrenia were, 14 (35%) belonged to 31-40 years .Among 8 (40%) and 6 (30%) belonged to both experimental and control group. 13(32.5%) belonged to the age group of 41 -50years, among 5 (25%) and 8 (40%) belonged to experimental and control group respectively. 13 (32.5%) belongs to 51-60 years among 7 (35%) and 6 (30%) belongs to experimental and control group respectively.

Regarding gender, majority of the patients with schizophrenia, 22 (55%) were male, in that 12 (60%) and 10 (50%) belonged to experimental group and control group respectively. 18 (45%) were female in that 8 (40%) and 10 (53.4) belonged to experimental group and control group respectively.

Regarding marital status, majority of the patients with schizophrenia, 22 (55%) were single, among whom 12 (60%) and 10 (50%) belonged to experimental group and control group respectively.13 (32.5%) were married, among which 6 (30%) and 7 (35%) belonged to experimental group and control group respectively. 4 (10%) were divorced, among 1 (5%) and 3 (15%) in experimental and control group. 1 (5%) belonged to widower or widow category in experimental group.

Regarding type of family, 23 (57.5%) belonged to nuclear family, among that 12 (60%) and 11(55%) in experimental and control group respectively. 17 (57.5%) belonged to joint family in that 8 (40%) and 7 (40%) belonged to experimental and control group respectively.

Regarding educational status, majority of the patients with schizophrenia, 15 (37.5%) comes under secondary education, in that 7 (35%) and 8 (4%) belongs to experimental group and control group respectively. 6 (15%) comes under primary education, in that 4 (20%) and 2 (15%) belongs to experimental and control group

respectively. 9 (22.5%) belonged to higher secondary education , among 3 (15%) and 6 (30%) belonged to experimental and control group respectively. 10(25%) belonged to graduate in that 6 (30%) and 4 (20%) belonged to experimental and control group respectively.

Regarding previous occupation, majority of the people 14 (35%)were unemployed, among whom 8 (40%) and 6 (30%) belonged to experimental group and control group respectively. 11 (27.5%) were self employed among 7 (35%) and 4 (20%) belongs to experimental and control group respectively. 2 (5%) were government employees, equally divided in both experimental and control group.13 (32.5%) belongs to private employees among 4 (20%) and 9 (45%) belongs to both experimental and control group respectively.

Regarding period of stay in centre, majority 16 (40%) belonged to 1-3 years, in that 7 (35%) and 9 (45%) in both experimental and control group. 11(27.5%) belonged to less than 1 year among which 8 (60%) and 3 (15%) belonged to experimental and control group respectively. 13 (32.5%) belonged to above 3 years, among 5 (25%) and 8 (40%) belonged to experimental ad control group respectively.

SECTION II:
DATA ON LEVEL OF PRIMARY MENTAL FUNCTION
AMONG SCHIZOPHRENICS

Table 2.1

Frequency and percentage distribution of pre test and post test level of primary mental function among schizophrenics in Experimental group.

N=20

Sl. No.	Level of primary mental function	Pre test score		Post test score	
		n	%	n	%
1	No impairment	-	-	1	5
2	Mild impairment	2	10	6	30
3	Moderate impairment	18	90	13	65

Table 2.1 shows that the level of primary mental function among schizophrenics in experimental group. Out of 20 sample, 18 (90%) had moderate impairment and 2 (10%) had mild impairment in pre test. In post test 1 (5%) had no impairment, 6 (30%) had mild impairment and 13 (65%) had moderate impairment of primary mental function.

Table 2.2

Frequency and Percentage distribution of pre test and post test level of primary mental function among schizophrenics in Control group.

N=20

Sl. No.	Level of primary mental function	Pre test score		Post test score	
		n	%	n	%
1	No impairment	-	-	-	-
2	Mild impairment	2	10	2	10
3	Moderate impairment	18	90	18	90

Table 2.2 shows that the level of primary mental function among schizophrenics in control group. In pre test and post test score 18 (90%) had moderate impairment and 2 (10%) had mild impairment of primary mental function.

SECTION III:
DATA ON EFFECTIVENESS OF ART THERAPY ON PRIMARY
MENTAL FUNCTION AMONG SCHIZOPHRENICS

Table 3.1

Mean, Standard deviation , Mean difference and ‘t’ value of pre test and post test level of primary mental function among Schizophrenics in Experimental group.

N = 20

Sl. No.	Group	Mean	Standard Deviation	Mean Difference	“t” value
1	Experimental group				
	Pre test	17.75	2.74	1.25	6.95*
	Post test	19	2.61		

*Significant at $p < 0.05$ level

Table 3.1 reveals that among experimental group, the mean pre test score was 17.75 with standard deviation 2.74 was less than the mean post test score 19 with standard deviation 2.61. The calculated mean difference was 1.25. The obtained “t” value is 6.95 was significant at $p < 0.05$ level.

Table: 3.2

Mean, Standard deviation, mean difference and 't' value of pre test and post test level of primary mental function among Schizophrenics in Control group.

N = 20

Sl. No.	Group	Mean	Standard Deviation	Mean Difference	"t" value
1	Control group				
	Pre test	17.1	2.42	0.1	NS 0.3
	Post test	17.2	2.48		

NS-Non Significant

Table 3.2 reveals that among control group, the mean pre test score was 17.1 with standard deviation 2.42 was less than the mean post test score 17.2 with standard deviation 2.48. The calculated mean difference was 0.1. The obtained "t" value is 0.3 was not significant at $p < 0.05$ level.

Table: 3.3

Mean, standard deviation and mean difference and ‘t’ value on post test level of primary mental function among Schizophrenics in Experimental and Control group.

N=40

Sl. No.	Group	Mean	Standard Deviation	Mean Difference	“t” value
1	Experimental group	19	2.61	1.8	2.307*
2	Control group	17.2	2.48		

*Significant at $p < 0.05$ level

Table 3.3 reveals that among experimental group the mean post test score was 19 with standard deviation 2.61 and in control group the mean post test score was 17.2 with standard deviation 2.48. The mean difference is 1.8. The obtained “t” value is 2.307 was significant at $p < 0.05$ level.

Hence the stated hypothesis was accepted. It is inferred that art therapy is effective on improving primary mental function among schizophrenics.

SECTION IV:
DATA ON ASSOCIATION BETWEEN PRIMARY MENTAL
FUNCTION AND THEIR DEMOGRAPHIC VARIABLES

Table: 4.1

Frequency, Percentage and χ^2 Distribution of post test level of primary mental function among schizophrenics with their demographic variables in Experimental Group.

N = 20

Sl. No.	Demographic variables	No impairment		Mild impairment		Moderate impairment		χ^2 value
		n	%	n	%	n	%	
1	Age in years							3.79 Df = 4
	a) 31-40 years	0	0	2	10	6	30	
	b) 41-50 years	1	5	1	5	3	15	
	c) 51-60 years	0	0	3	15	4	20	
2	Gender							3.04 Df = 2
	a) Male	1	5	5	25	6	30	
	b) Female	0	0	1	5	7	35	
3	Marital status							4.83 Df = 6
	a) Single	1	5	2	10	9	45	
	b) Married	0	0	2	10	4	20	
	c) Divorced	0	0	1	5	0	0	
	d) Widow	0	0	0	0	1	5	
4	Type of family							2.2 Df = 2
	a) Nuclear	0	0	3	15	9	45	
	b) Joint	1	5	3	15	4	20	
5	Educational status							12.15 Df = 6
	a) illiterate	0	0	0	0	0	0	
	b) Primary	0	0	0	0	4	20	
	c) Secondary	0	0	2	10	5	25	
	d) Higher secondary	1	5	0	0	2	10	
	e) Graduate	0	0	4	20	2	10	
6	Previous occupation							6.66 Df = 6
	a) Unemployed	0	0	2	10	6	30	
	b) Self employed	0	0	2	10	5	25	
	c) Govt. employee	0	0	1	5	0	0	
	d) Pvt. employee	1	5	1	5	2	10	
7	Period of stay in centre							2.78 Df = 4
	a) <1 year	0	0	3	15	5	25	
	b) 1 to 3 years	1	5	1	5	5	25	
	c) Above 3 years	0	0	2	10	3	15	

In experimental group, after art therapy intervention, with regard to age, among 31 to 40 years, majority 6 (30%) of schizophrenics experienced moderate impairment of primary mental function, 2 (10%) had mild impairment. Among 41 to 50 years 1 (5%) had no impairment, 1 (5%) had mild impairment and 3(15%) had moderate impairment. Among 51 to 60 years, 3 (15%) of schizophrenics experienced mild impairment, 4 (20%) had moderate impairment. The obtained χ^2 value is 3.79 and which is not statistically significant at $P<0.05$ level. Hence it is inferred that age have no statistically significant association with primary mental function among schizophrenics. Hence the stated hypothesis H3 is not accepted.

With regards to gender, among male, majority 6 (30%) of Schizophrenics experienced moderate level of impairment, 5 (25%) had mild impairment and 1 (5%) had no impairment. Among female majority, 7 (35%) of schizophrenics experienced moderate impairment, 1 (5%) had mild impairment. The obtained χ^2 value is 3.04 and which is statistically not significant at $P<0.05$ level. Hence it is inferred that sex have no statistically significant association with primary mental function and the stated hypothesis H3 is not accepted.

With regards to marital status, among single 1 (5%) of schizophrenics experienced no impairment, 2 (10%) had mild impairment and 9 (45%) had moderate impairment. Among married 2 (10%) of schizophrenics experienced mild level of impairment. Among divorced 1 (5%) experienced mild level of primary mental function impairment. Among widow/widower 1 (5%) had moderate impairment. The obtained χ^2 value is 4.83 and which is statistically not significant at $P<0.05$ level. Hence it is inferred that marital statuses have no statistically significant association with primary mental function among schizophrenics and the stated hypothesis H3 is not accepted.

With regards to type of family, among nuclear family majority 9 (45%) of schizophrenics experienced moderate level of impairment, 3 (15%) had mild impairment. Among joint family, 1(5%) had no impairment, 3 (15%) had mild impairment and 4 (20%) had moderate impairment. The obtained χ^2 value is 2.2 and which is statistically not significant at $P < 0.05$ level. Hence it is inferred that type of family have no statistically significant association with primary mental function among schizophrenics and the stated hypothesis H3 is not accepted.

With regards to educational status, among primary education, 4 (20%) of schizophrenics experienced moderate level of primary mental function impairment. Among secondary education 2 (10%) had mild impairment and 5 (25%) had moderate impairment. Among higher secondary education 1 (5%) had no impairment and 2 (10%) had moderate impairment. Among graduate 4 (20%) had mild impairment and 2 (10%) had moderate impairment. The obtained χ^2 value is 12.15 and which is statistically not significant at $P < 0.05$ level. Hence it is inferred that educational status have no statistically significant association with primary mental function among schizophrenics and the stated hypothesis H3 is not accepted.

With regards to previous occupation, among unemployed majority 6 (30%) of schizophrenics experienced moderate impairment of primary mental function and 2 (10%) had mild impairment. Among self employed, 2(10%) had mild impairment and 5 (25%) had moderate impairment. Among Govt.employee 1 (5%) had mild impairment and among private employee, 1 (5%) had no impairment and mild impairment and 2 (10%) had moderate impairment. The obtained χ^2 value is 6.66 and which is statistically not significant at $P < 0.05$ level. Hence it is inferred that previous occupation have no statistically significant association with primary mental function among schizophrenics and the stated hypothesis H3 is not accepted.

With regards to period of stay in centre, among less than 1 year majority 5 (25%) of schizophrenics had moderate level of primary mental function impairment and 3 (15%) had mild impairment. Among 1 to 3 years, 1 (5%) had no impairment and mild impairment and 5 (25%) had moderate impairment. Among above 3 years 2 (10%) had mild impairment and 3 (15%) had moderate impairment. The obtained χ^2 value is 2.78 and which is statistically not significant at $P < 0.05$ level. Hence it is inferred that period of stay in centre have no statistically significant association with primary mental function among schizophrenics and the stated hypothesis H3 is not accepted.

Table: 4.2

Frequency, Percentage and χ^2 Distribution of Post test level of Primary mental function t among schizophrenics with their demographic variables in Control group.
N = 20

Sl. No.	Demographic variables	Mild impairment		Moderate impairment		χ^2 value
		n	%	n	%	
1	Age in years					1.44 Df = 2
	a)31-40 years	1	5	5	25	
	b)41-50 years	0	0	8	40	
	c)51-60 years	1	5	5	25	
2	Gender					0 Df = 1
	a)Male	1	5	9	45	
	b)Female	1	5	9	45	
3	Marital status					0.46 Df = 3
	a)Single	1	5	9	45	
	b)Married	1	5	6	30	
	c)Divorced	0	0	3	15	
	d)Widow	0	0	0	0	
4	Type of family					2.7 Df = 1
	a)Nuclear	0	0	11	55	
	b)Joint	2	10	7	35	
5	Educational status					0.96 Df = 3
	a)illiterate	0	0	0	0	
	b)Primary	0	0	2	10	
	c)Secondary	1	5	7	35	
	d)Higher secondary	1	5	5	25	
	e)Graduate	1	5	4	20	
6	Previous occupation					2.29 Df = 3
	a)Unemployed	1	5	5	25	
	b)Self employed	1	5	3	15	
	c)Govt. employee	0	0	1	5	
	d)Pvt.employee	0	0	9	45	
7	Period of stay in centre					0.44 Df = 2
	a)<1 year	0	0	3	15	
	b)1 to 3 years	1	5	8	40	
	c)Above 3 years	1	5	7	35	

In control group, with regards to age, among 31 to 40 years, majority 5 (25%) of schizophrenics experienced moderate impairment of primary mental function, 1 (5%) had mild impairment. Among 41 to 50 years 8 (40%) had moderate impairment. Among 51 to 60 years, 1 (5%) of schizophrenics experienced mild impairment, 5 (25%) had moderate impairment. The obtained χ^2 value is 1.44 and which is not statistically significant at $P < 0.05$ level. Hence it is inferred that age have no statistically significant association with primary mental function among schizophrenics. Hence the stated hypothesis H3 is not accepted.

With regards to gender, among male, majority 9 (45%) of Schizophrenics experienced moderate level of impairment, 1 (5%) had mild impairment. Among female majority, 9 (45%) of schizophrenics experienced moderate impairment, 1 (5%) had mild impairment. The obtained χ^2 value is 0 and which is statistically not significant at $P < 0.05$ level. Hence it is inferred that sex have no statistically significant association with primary mental function and the stated hypothesis H3 is not accepted.

With regards to marital status, among single 1 (5%) of schizophrenics experienced mild impairment, 9 (45%) had moderate impairment. Among married 1 (5%) of schizophrenics experienced mild level of impairment and 6 (30%) had moderate impairment. Among divorced 3 (15%) experienced moderate level of primary mental function impairment. The obtained χ^2 value is 0.46 and which is statistically not significant at $P < 0.05$ level. Hence it is inferred that marital statuses have no statistically significant association with primary mental function among schizophrenics and the stated hypothesis H3 is not accepted.

With regards to type of family, among nuclear family majority 11 (55%) of schizophrenics experienced moderate level of impairment. Among joint family, 2 (10%) had mild impairment and 7 (35%) had moderate impairment. The obtained χ^2 value is 2.7 and which is statistically not significant at $P < 0.05$ level. Hence it is inferred that type of family have no statistically significant association with primary mental function among schizophrenics and the stated hypothesis H3 is not accepted.

With regards to educational status, among primary education, 2 (10%) of schizophrenics experienced moderate level of primary mental function impairment. Among secondary education 1 (5%) had mild impairment and 7 (35%) had moderate impairment. Among higher secondary education 1 (5%) had mild impairment and 5 (25%) had moderate impairment. Among graduate 4 (20%) had moderate impairment. The obtained χ^2 value is 0.96 and which is statistically not significant at $P < 0.05$ level. Hence it is inferred that educational status have no statistically significant association with primary mental function among schizophrenics and the stated hypothesis H3 is not accepted.

With regards to previous occupation, among unemployed majority 5 (25%) of schizophrenics experienced moderate impairment of primary mental function and 1 (5%) had mild impairment. Among self employed, 1 (5%) had mild impairment and 3 (15%) had moderate impairment. Among Govt.employee 1 (5%) had moderate impairment and among private employee, 9 (45%) had moderate impairment. The obtained χ^2 value is 2.29 and which is statistically not significant at $P < 0.05$ level. Hence it is inferred that previous occupation have no statistically significant association with primary mental function among schizophrenics and the stated hypothesis H3 is not accepted.

With regards to period of stay in centre, among less than 1 year majority 3 (15%) of schizophrenics had moderate level of primary mental function impairment. Among 1 to 3 years, 1 (5%) had mild impairment and 8 (40%) had moderate impairment. Among above 3 years 1 (5%) had mild impairment and 7 (35%) had moderate impairment. The obtained χ^2 value is 0.44 and which is statistically not significant at $P < 0.05$ level. Hence it is inferred that period of stay in centre have no statistically significant association with primary mental function among schizophrenics and the stated hypothesis H3 is not accepted.

CHAPTER V

DISCUSSION

This chapter deals with the discussion which was based on the findings obtained from the statistical analysis and its relation to the objectives of the study.

The basic aim of the present study was to assess the effectiveness of art therapy on primary mental function among schizophrenics. The study was conducted by using a quasi experimental pre test post test with control group design. Kongunadu Mananala Arakkattalai psychiatric centre was selected for conducting the study. Purposive sampling was used to select subjects for conducting the study. The sample size was 40 among which 20 were in interventional group and 20 were in control group.

Standardized Mini Mental State Examination tool was used to assess the primary mental function. The tool was administered through structured interview schedule. The standard scale consists of 5 items. The responses were analyzed by using descriptive statistics (mean, standard deviation, mean percentile, frequency and percentage) and inferential statistics (paired 't' test, and chi square test). Discussions on the findings were arranged based on the objectives of the study.

Objective 1: To assess the level of primary mental function among schizophrenics in experimental and control group.

The findings of this study revealed that the schizophrenics in interventional and control groups during the pre test majority (90%) experienced moderate level of impairment. But during the post test 30% of patients' experienced mild impairment in

experimental group 5% had no impairment in primary mental function and 65% had moderate impairment. And in control group 90% experienced moderate impairment, 10% had mild level of primary mental function impairment during the pre test and there was no change in the level of primary mental function observed during the post test.

Hypothesis 1: There is a significant difference in the level of primary mental function among schizophrenics.

In this study there is significant difference in the level of primary mental function among schizophrenics between control and interventional group. So this hypothesis was accepted.

The findings were supported by Arun Pongpaisal et.al (2013), evaluated the cognitive impairment in schizophrenia patients. Montreal cognitive test was used to assess the cognitive functions. The prevalence of cognitive impairment was 81.3%. The study concluded that the patients with schizophrenia showed a high prevalence of cognitive impairment.

The findings were also supported by Rajeev Krishnadas (2007) conducted a cross sectional study to findout the relationship of cognitive function in patient with schizophrenia. Results shown that persistent cognitive deficits are seen in patient with schizophrenia.

Objective 2: To assess the effectiveness of art therapy on primary mental function among schizophrenics.

The results of this study revealed that among the interventional group the mean pre-test score of primary mental function was 17.75with standard deviation 2.74.In

contrast, the mean post-test score of primary mental function was 19.2 with standard deviation of 2.61. The obtained 't' value 6.95 was significant at $p < 0.05$ level. Among the control group the mean pre-test score of primary mental function was 17.1 ± 2.42 and post test score was 17.2 ± 2.47 . The obtained 't' value 1.625 was not significant at $p < 0.05$ level.

Hypothesis 2: There is a significant difference in the level of primary mental function among schizophrenics in experimental group before and after art therapy.

This study finding reveals that there is significant difference in the level of primary mental function before and after art therapy among schizophrenics. So this hypothesis was accepted.

This findings were supported by Crawford MJ et.al (2012) investigated the effectiveness of art therapy among schizophrenics. The study concluded that group art therapy can be use as an adjunctive treatment for schizophrenia patients.

The findings were also supported by Baptisle et.al (2013) investigated the effectiveness of group art therapy for schizophrenia patients. The researcher included patients of 18 years of age and having clinical diagnosis of schizophrenia. The art therapy can be useful for schizophrenics.

Objective 3: To associate the post test level of primary mental function among schizophrenics with their selected demographic variables.

Chi square was calculated to find out the association between the post test scores of control and interventional groups with their selected demographic variables. These findings revealed that there was no significant association found between the post-test scores of control and interventional groups with selected demographic variables.

Hypothesis 3: There is an association between post test level of primary mental function among Schizophrenics with their selected demographic variables.

This study finding reveals that there is no association between the post test level of primary mental function among control and interventional group of schizophrenics with their selected demographic variables. So this hypothesis was rejected.

The findings were also supported by Bharati T Talreja et.al.,(2013) evaluated the primary mental function and its association with sociodemographic factors in schizophrenia patients. The study findings depict that persistent cognitive deficits are seen in patients with schizophrenia. Its correlation with sociodemographic factors showed that patients with >2 years of illness and belonging to urban habitat showed more cognitive dysfunction.

CHAPTER VI

SUMMARY, CONCLUSION AND RECOMMENDATIONS

This chapter presents a brief account of the present study. It deals with the summary, conclusion and recommendations of the present study. Conclusions are drawn from the findings and the implications of the results for nursing practice, nursing education, nursing research and nursing administration are stated.

Summary

The present study was to evaluate the effectiveness of art therapy on primary mental function among schizophrenics in a selected psychiatric rehabilitation at Coimbatore. This study conducted by using quasi experimental pre test post test control group research design. This study aims to evaluate the effectiveness of art therapy on primary mental function among schizophrenics in a selected psychiatric rehabilitation centre, Coimbatore. The samples were selected by using non probability purposive sampling technique. The sample size was 40. The tool used for data collection was Standardized Mini Mental State Examination tool. The collected data was analyzed by means of descriptive and inferential statistics.

Objectives of the Study

- ✓ To assess the level of primary mental function among schizophrenics in experimental and control group
- ✓ To determine the effectiveness of art therapy on primary mental function among schizophrenics in experimental group.

- ✓ To associate the post test level of primary mental function among schizophrenics with their selected demographic variables.

Major Study Findings

- ✓ The study findings revealed that among 40 schizophrenics, majority of them belonged to 31-40 years of age, male, single, nuclear family, primary education, unemployed and 1-3 years of period of stay in rehabilitation centre.
- ✓ Regarding level of primary mental function during pre test in experimental and control group majority 18 (90%) had moderate and 2 (10%) had mild impairment of primary mental function. During post assessment in experimental group 1 (5%) had no impairment, 6 (30%) had mild impairment and 13 (65%) had moderate impairment of primary mental function.
- ✓ Regarding the effectiveness of art therapy on improving primary mental function among schizophrenics, the results shows that art therapy was effective in improving primary mental function among schizophrenics between pre test and post test score.

Conclusion of the Study

The main conclusion drawn from the present study was that most of the Schizophrenics had moderate and mild impairment of primary mental function in pre test and improved their level of Primary mental function in post test. This shows that the selected art therapy for the present study was effective in improving primary mental function among schizophrenics. Art therapy can be taught to the schizophrenics for improving primary mental function.

Implications of the Study

According to Tolsma (1995) the section of the research report that focuses on nursing implication usually includes specific suggestions for nursing practice, nursing education, nursing research and nursing administration. Nursing implication for this study is enlisted below:

Nursing Practice

Clinical nurse can:

- ✓ Learn accurate assessment of primary mental function by using Standardized Mini Mental State Examination tool.
- ✓ Learn the techniques of art therapy
- ✓ Impart art therapy to the schizophrenics in hospital.
- ✓ Understand the importance of art therapy as an adjuvant to the pharmacological therapy.
- ✓ Encourage the use of art therapy as a complementary therapy in improving primary mental function among schizophrenics
- ✓ Recognize the findings of the current study which can be used as a baseline to provide instructions to schizophrenics with primary mental function impairment.

Nursing Education

Nurse educators can:

- ✓ Teach the assessment of level of primary mental function and effectiveness of art therapy on improving primary mental function among schizophrenics, as an independent nursing intervention.

- ✓ Provide adequate exposure to students to a setting where art therapy is practiced.
- ✓ Teach art therapy using audio visual aids, group conference etc.

Nursing Research

Nurse researcher can:

- ✓ Encourage future research studies on the effectiveness of art therapy on Primary mental function among schizophrenics.
- ✓ Disseminate the finding through the conference, seminars, publications, National and international journal and World Wide Web.

Nursing Administration

Nurse administrator can:

- ✓ Organize in-service education program for the nurses on this complementary technique.
- ✓ Make cost effectiveness on the nursing care by reducing the usage of medications among schizophrenics
- ✓ Encourage nurses to conduct research on various complementary techniques.
- ✓ Provide opportunity for nurses to attend training program on art therapy.

Limitation

- ✓ The researcher could not be able to assemble the samples at regular time.

Recommendations

- ✓ Similar kind of study can be conducted in a large group.
- ✓ A comparative study can be done between the effectiveness of various non pharmacological measures and primary mental function among schizophrenics.
- ✓ Similar kind of study can be conducted in different setting.
- ✓ A longitudinal study can be undertaken to see the long effect of art therapy on primary mental function among schizophrenics.
- ✓ A descriptive study can be conducted on knowledge and attitude regarding art therapy.

DATA COLLECTION PROCEDURE



ART THERAPY

